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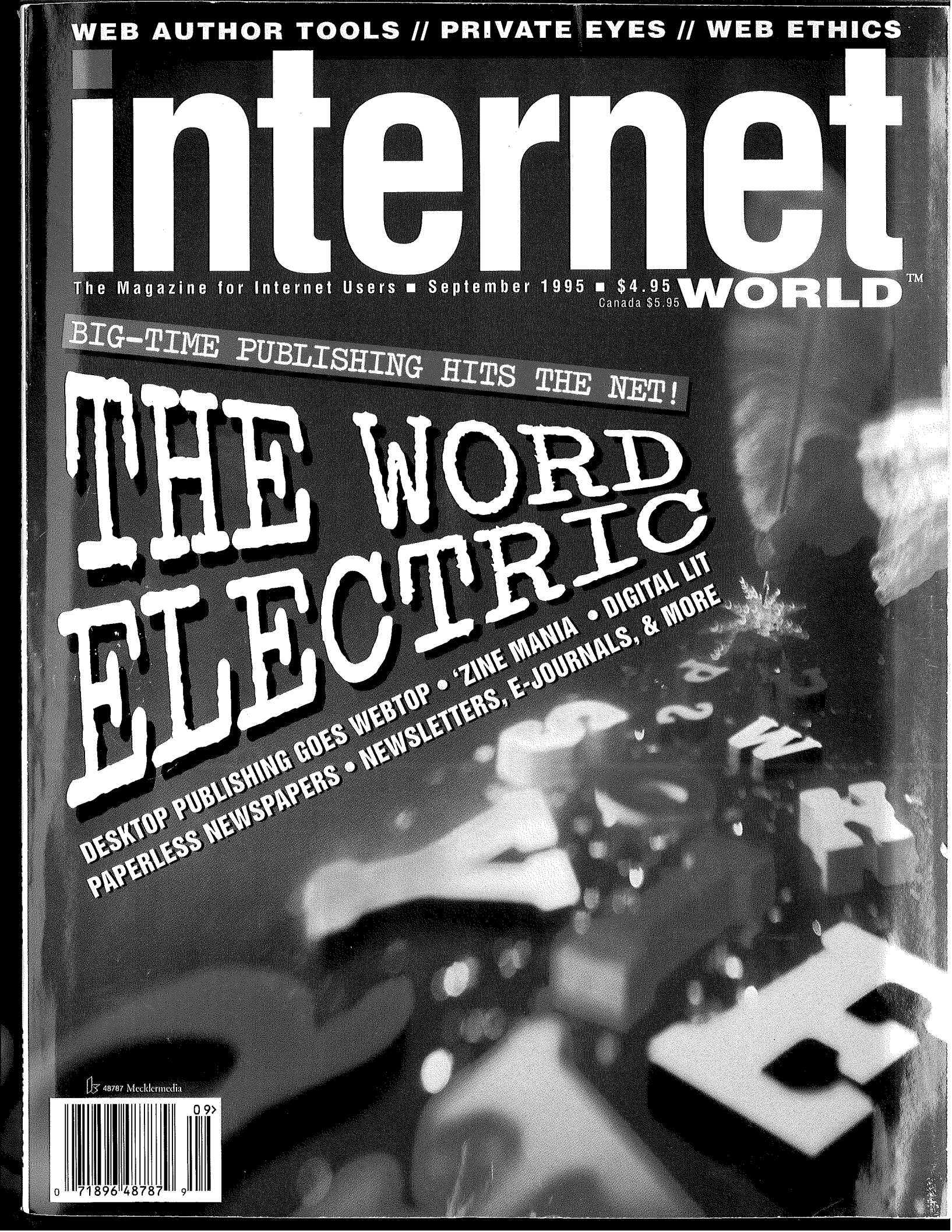
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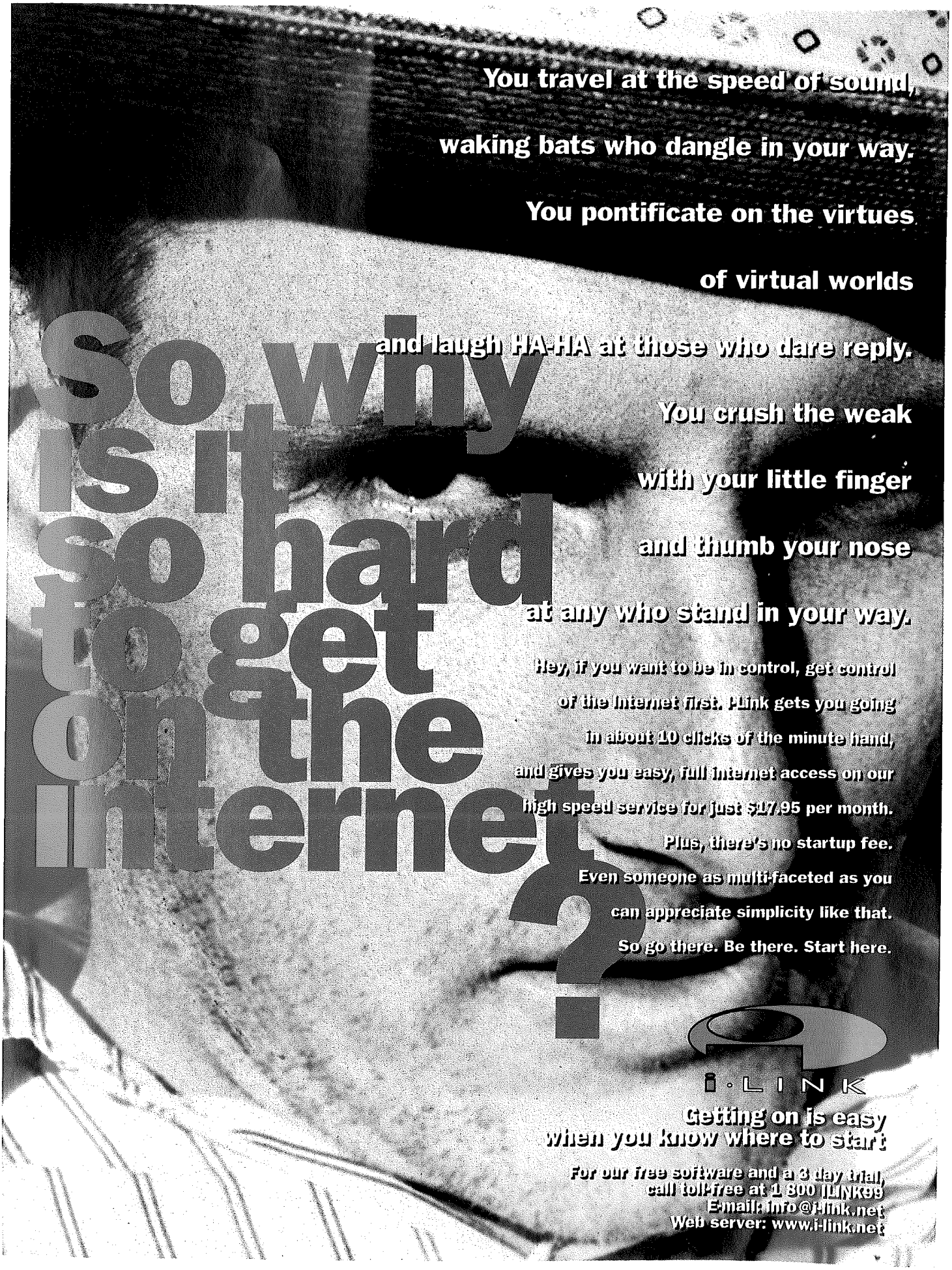
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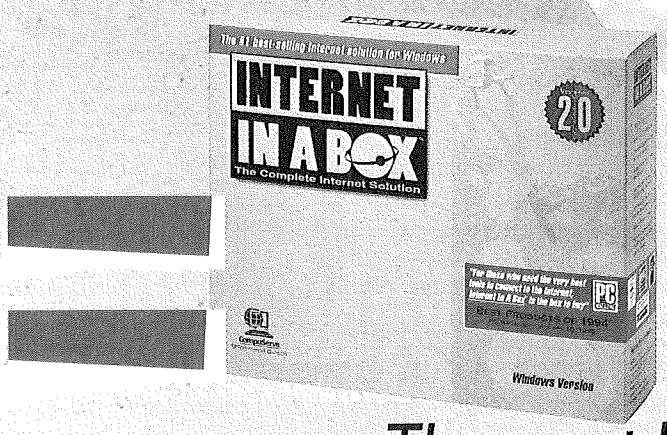
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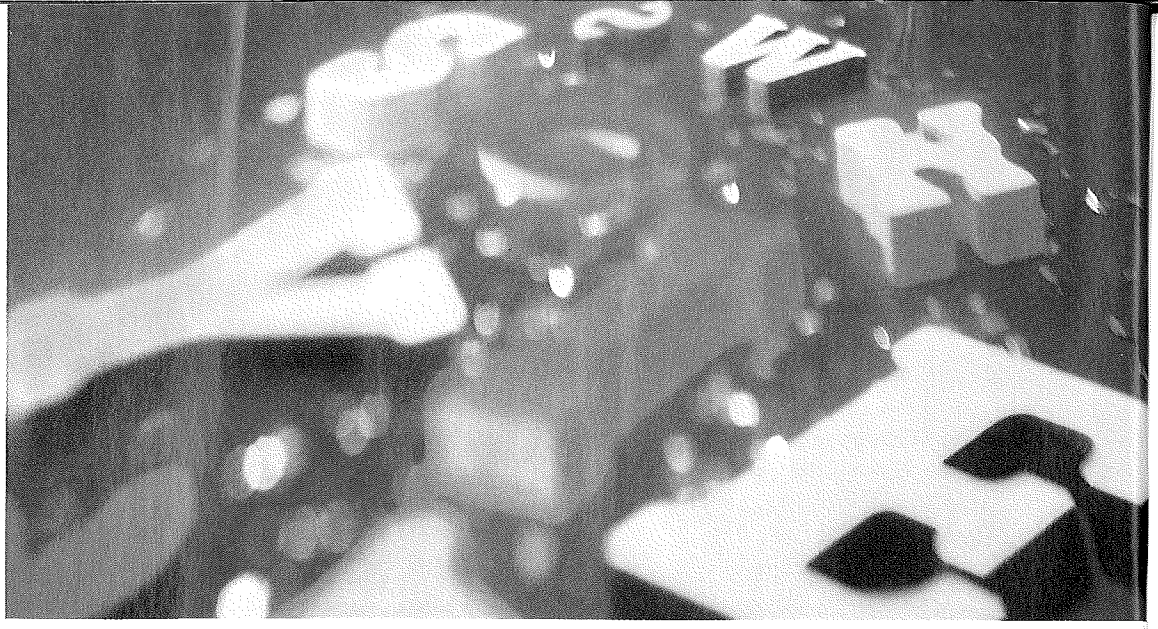
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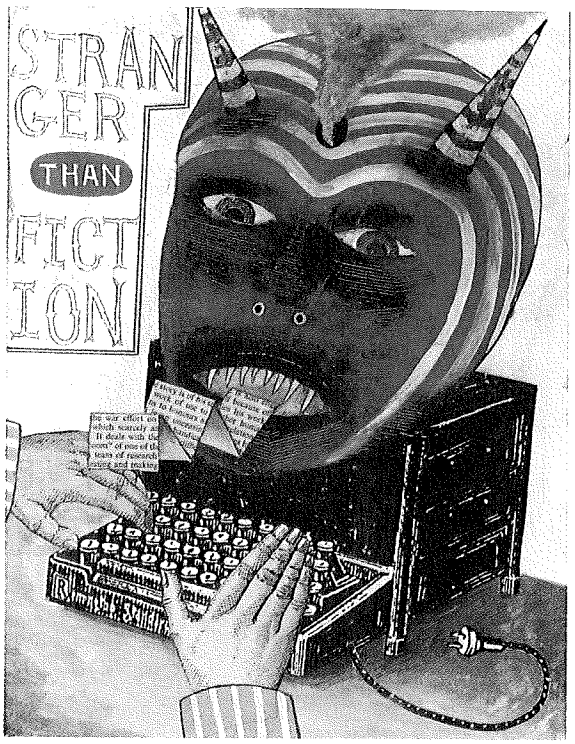
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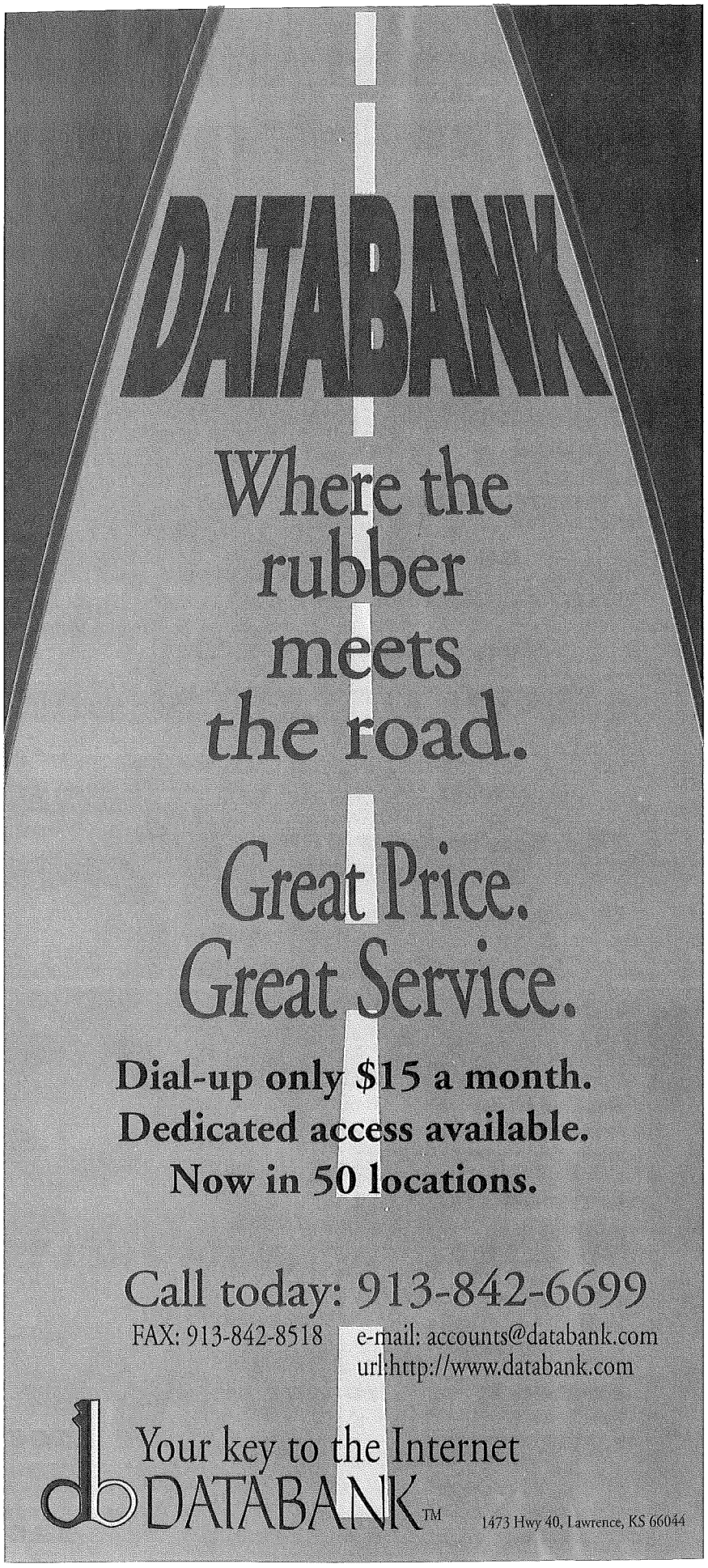
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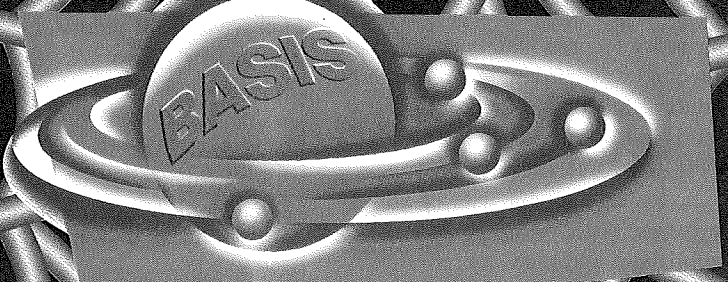
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CIRCLE NUMBER 25

Theater of War

THE INTERNET HAS become a battleground in the exploding online publishing arena. Battles are taking shape on many fronts as vendors position themselves to provide servers, authoring tools, site hosting services, navigation programs, transaction systems, and content.

A revolution also is occurring as desktop publishing is extended to *network* publishing, which on the World-Wide Web has been dubbed "Webtop publishing." Like desktop publishing, Webtop publishing gives the masses a cheap and easy means to produce publications. But Internet publishing goes beyond desktop publishing in allowing individuals to make their work available to millions of readers around the world instantly.

A race is on to provide the next generation of programs like PageMaker and Quark for this Webtop publishing market. As Jeremy Carl relates (in "HTML Helpers," pg. 62), a host of new authoring tools and servers are cropping up, many from startup companies.

Indeed, as the market matures, the flow of venture capital to fund Internet startups is increasing. The $47 million invested in the first quarter of 1995 surpassed the total amount invested in 1994 ($42 million), according to a recent article in *The New York Times* ("The Serious Money Hits the Superhighway," by Laurie Flynn, June 26, pg. D5). If the trend continues, total investment in Internet startups in 1995 likely will exceed $200 million.

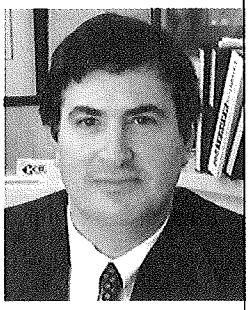
The first wave of investing focused mainly on Internet access providers. In the second wave, investors are shifting to software tools and multimedia content creators. A new venture by David Bunnell—who founded *PC Magazine*, *PC World*, and *MacWorld*—is an Internet publishing company called Content.com, which will put lists of books online for readers to browse and order.

For professional publishers and many corporations, having at least a presence on the Internet has become mandatory. Every major newspaper and magazine has launched a Web site, and many uniquely Internet publications are being developed. Many companies are not only establishing marketing presences to the outer Internet, but are using Web sites for internal communications.

The ability of millions of people to publish on the Net will result in a glut of information. Already it is impossible to peruse the thousands of Web sites in existence, and competition is getting fiercer among rivals attempting to attract users to their sites. On the flip side, wonderful new information, search, and news services are being developed. And the addition of 3D and virtual reality formats are pushing the multimedia envelope further.

America Online, CompuServe, and Prodigy are all formulating strategies to combat the encroachment of the Internet on their proprietary domains. The key question is whether these commercial networks can continue to attract paying customers as the Internet grows. As Brewster Kahle argues in his interview with Jeff Ubois ("Wide Area View," pg. 74), America Online has bought a gaggle of leading-edge Internet companies and is moving to become a major national Internet provider to fight against the onslaught of the coming Microsoft Network.

In this issue, we explore the revolutionary world of Internet publishing from many angles. Richard Wiggins provides an overview of the various types of publication activities taking place on the Net and discusses how companies can get into the game. Publishing of Internet magazines, newspapers, 'zines, and newsletters is covered by Paul Ferguson, Reid Goldsborough, Alex Swain, and Rosalind Resnick. Ryan Donmoyer describes the creation of the Internet newspaper *The American Reporter,* while David Appel profiles *Telecom Digest* editor Patrick Townson. And we kick off our new Joe.User (Jane.User) column with a piece by Geoffrey Baker, who describes how a small Maine newspaper found new life on the Net.



Elsewhere, Peter Reed discusses the ethics of Web publishing, while Cary Tennis tells how private investigators are using the Net. Finally, Mike Godwin explores the the legal and emotional intricacies of the Jake Baker case, which, among other issues, pits the right to publish disturbing sexual material vs. First Amendment rights.

Censorship issues still are being decided that will affect the nature of publishing on the Internet. The Telecommunications Reform Act that incorporated the Communications Decency Act championed by Senator Exon was passed in the U.S. Senate and will move to the House of Representatives. House Speaker Newt Gingrich has spoken out against the bill as "a violation of free speech." Meanwhile, a group of Internet vendors has allied to promote self-policing measures while World-Wide Web inventor Tim Berners-Lee has proposed a movie-like content-rating system for Web site material.

Things, as they say, are getting interesting. Stay tuned for further reports from the front lines.

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CIRCLE NUMBER 7

letters to the editor

BUTT OUT

Ten minutes into my latest issue, and I have to respond. I am replying to Kendall T. Martin's "A Cleaner Internet" letter (Letters, Aug. *IW*). I find it increasingly saddening that people cry out like Mr. Martin, begging for someone to protect us from ourselves. If any one group—providers, the government, me, or you—were to have the power to screen out the "unacceptable," who would be right?

Why should I be denied access to a newsgroup or Web page or anything on the Net because someone else deems it "unacceptable?" If you find something offensive, do not look at it. If a newsgroup offends you, do not read it. It is not fair to punish me because someone else's children see something bad on the Net. If you police the Net for certain things, then I guess you'd better take away my phone; I might make a 900-number call. You'd better take my VCR; I might rent an "unacceptable" movie. Better take away my television; I might watch an "unacceptable" show.

I'll support everyone's individual right to not look at something they don't want to view. However, I will fight as long as needed to keep any one group from deciding what is appropriate for me to see. I will never force my opinion of right and wrong on you, either. We are adults. Make up you own mind. Don't make up mine.

STEVE LIGHT
slight@vnet.net

PARENTAL ISSUE

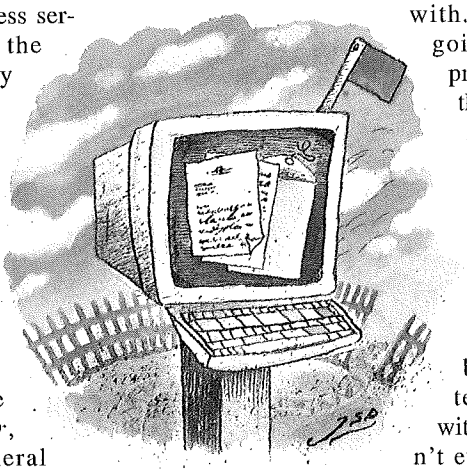
With all of the hoopla about the misrepresentation of the Internet in the media and Senator Exon and company's crusade to "protect the youth of America" by outlawing "indecency" on it, I am amazed that very little emphasis on parental responsibility has come forth from either camp. After all, this is what is central to the entire issue. If parents do not want their children to be exposed to sensitive material of any kind, then it is their responsibility to take a keen interest in what their children are doing on their computers. You can bet that when my kid reaches the age of computer literacy, I'll be right there alongside him.

I found Mike Godwin's article "Nix to Exon" (Aug. *IW*) informative as well as editorially interesting. I propose a fifth explanation of Senator Exon's actions: He has a marked lack of faith in American parental involvement. Because of this he wishes to play daddy to everybody, including the consenting adults capable of making intelligent decisions on their own. Such control freaks are pitiable, but when elected to positions of power such as the U.S. Senate, they become dangerous to the intellectual foundations of the country.

DAVID PILKINGTON
pilkington@lfmail.lfc.edu

FULL ACCOUNTING

In the August issue of *Internet World*, both David Noack and Cynthia James-Catalano refer to the Government Printing Office Access service offered by the GPO. However, they both failed to mention the full extent of its contents as well as the fact that there are many more free access sites than what was mentioned. Besides bills, the *Congressional Record*, and the *Federal Register*, there are General Accounting Office reports, the U.S. Code, Public Laws, the History of Bills, and the Unified Agenda. In regard to access, GPO is working on providing at least one free gateway site in each state. For a complete list of current gateway sites, look at **http://www.access.gpo.gov/su_docs/aces/aces004.html**.



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WHERE THE GIRLS ARE

In the July Surfboard you ask where the girls—that is, women—are. I don't know where you are looking, but there are plenty of us out there. I am on one e-mail discussion group, **dsouth-l@vm.ege.edu.tr**, where the women outnumber the men 2:1. This group has a more social feel to it rather than a technical bent. There are no flames allowed here and a certain code of behavior is expected of all participants. The friendly atmosphere keeps people happy with this list—as well as an interest in discussing the TV show *Due South*. The men aren't complaining, as far as I can tell. Women do participate on the Net. Just keep on looking.

COLLEEN MCCLOSKEY
cmcc@charm.net

FELLOW CONTORTIONIST

Thank you for Joel Snyder's "Torture Test" (Aug. *IW*). I've been waiting two weeks for a local Internet access provider to configure my SLIP connection. Now they tell me it's my modem. I'm frustrated and will be shelling out more money for a "brand name" modem they can deal with. I thought about going to a different provider, but this is the only one with a local number for my city. Why is this so difficult? I thought I'd be designing and posting Web pages by now and instead, I wait. My boyfriend is a systems analyst, and without him I wouldn't even have Trumpet WinSock up and running. Know anyone who'd like to buy a slightly used generic 14.4 modem?

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UPDATES AND CORRECTIONS

The address for the National Organization for Women (mentioned in June's Cyberlibrarian, pg. 28) is **http://now.org/now**.

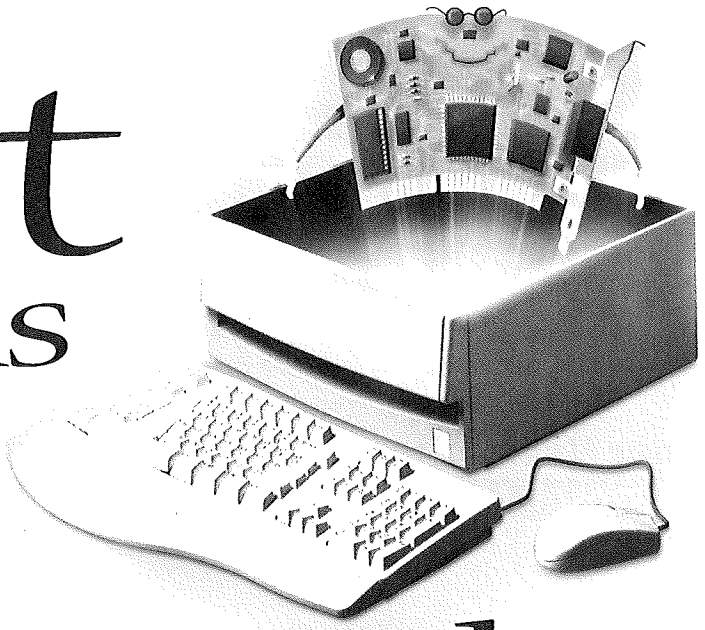
In July's Found It on the Net, pg. 92, the URL in "I Can't Drive 55" should read **http://eden.telalink.net/zoomst/copcars/copcars.html**.

In "State of the States" (August *IW*), author James Igoe's e-mail address was misprinted. It is **igoe@ux1.cso.uiuc.edu**.

The new address for the WebCrawler search tool is **http://www.webcrawler.com**.

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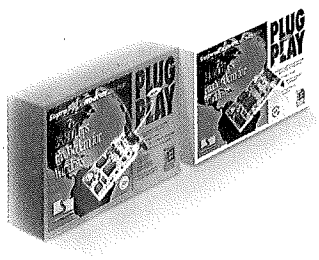
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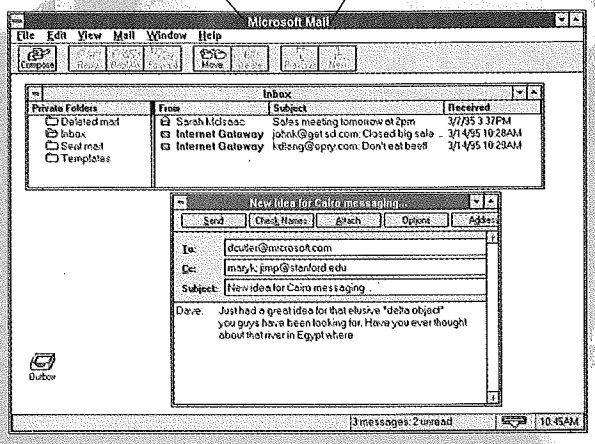
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CIRCLE NUMBER 77

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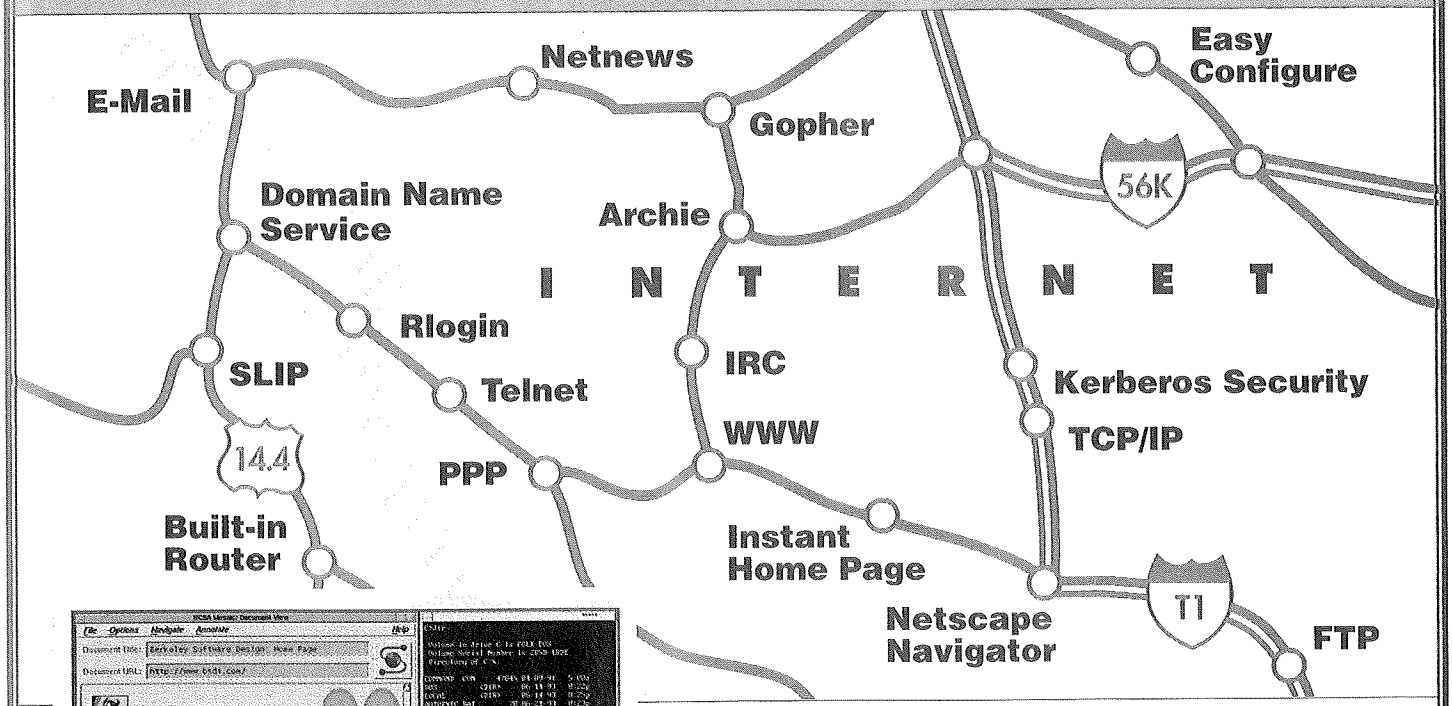
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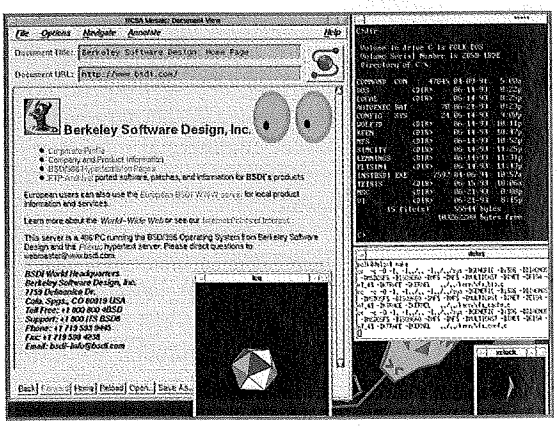
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CIRCLE NUMBER 17

Internet News



By Andrew Kantor and Tristan Louis

The Internet: You Can Bank on It

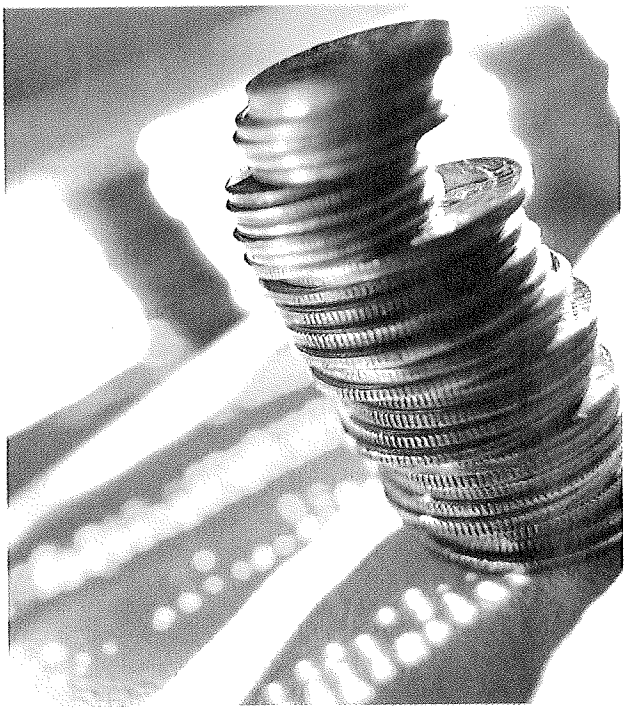
Banking on the Internet, once prohibitive because of weak security, is slowly coming to fruition as the first banks begin to make services available to customers online. In addition, mega rivals Visa International and MasterCard International have teamed up to develop a means of conducting secure credit card transactions on the Net.

Wells Fargo, the second largest bank in California, is among the first to offer rudimentary banking services on the Net. Its customers can now obtain information about the bank's services and can access checking and savings account balances, credit lines, and a list of checking transactions for the previous 45 days. Later, the bank plans to enable customers to open accounts via the Net. Wells Fargo is working with Netscape Communications Corp. to develop a system to transfer encrypted information to its customers.

Wells Fargo also is experimenting with Internet payment with a few merchants in the San Francisco Bay Area. Last April, the company announced it would partner with Cybercash to offer electronic payments. The Cybercash system allows users to create "virtual purses" in which they carry electronic money. Because a user withdraws the money from the purse the way he or she would withdraw cash from an ATM, the transactions are more anonymous than direct transfer from a bank account to a merchant.

For more information, send e-mail to **info@wellsfargo.com**, call (800) 956-4442, or visit **http://www.wellsfargo.com**.

Taking the concept of online banking one step further are two large banks—Wachovia and Huntington Bancshares—and a smaller one, Area Bancshares. The three firms are teaming up to create the first Internet-only bank, Security First Network Bank (SFNB). The venture, in which the three partners have invested a combined $5 million, is scheduled to begin offering full banking services via the World-Wide Web by the end of the year. Visit its site at **http://www.sfnb.com**.



Photograph by John Wilkes

Visa and MasterCard, which are responsible for more than 690 million credit cards worldwide, have allied to create a common secure standard for credit card transactions on the Internet. The two firms, usually are fierce competitors, are seeking to extend their reach in the burgeoning Internet commercial market where millions of potential consumers await.

Visa has been working with Microsoft to develop a software program to keep credit card payments private by issuing passwords to customers, while MasterCard has been working on a similar system with Netscape Communications Corp. Europe's largest credit card company, a consortium of banks called Europay, has been working with IBM to develop a secure Internet credit card system.

INDECENT COMMUNICATIONS

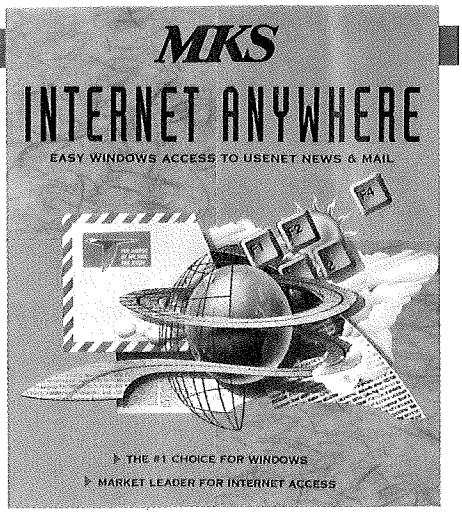
The Communications Decency Act, an amendment to the Telecommunications Reform Act, passed in the U.S. Senate by a vote of 84-16, despite massive opposition on the Internet. Introduced by Nebraska Democrat James Exon, the act calls for fines of up to $100,000 and prison terms of up to two years for people who distribute sexually explicit and other—undefined—indecent material online.

The House of Representative's version of the Telecommunications Reform Act does not yet include the language of the Decency Act, which House Speaker Newt Gingrich (R-Georgia) characterized as "a violation of free speech and the right of adults to communicate with each other."

But fears over the effect of the bill might be exaggerated. According to Eileen Kent of Playboy Interactive Services, the bill will never be enforced "because it's a vague, misdirected book-burning, attempting to instill fear in parents. The important thing is to educate children, not to put your head in a bag."

SUITE-ER EVERY DAY

The ranks of Internet suite providers are swelling with the introduction of new packages from MKS, Quarterdeck, Software Ventures, and Wollongong. Internet suites are all-in-one software packages designed to ease the task of connecting to the Net and navigating it.



MKS'S INTERNET ANYWHERE IS A WINDOWS PROGRAM THAT LISTS for $79. It provides SLIP connection software, including a graphical collection of e-mail, Usenet news, FTP, and telnet applications, as well as the Enhanced Mosaic browser. For more info, send e-mail to iasales@mks.com, call (519) 883-3242, or visit http://xwww.mks.com.

QUARTERDECK'S $79 INTERNET SUITE FEATURES E-MAIL, Usenet news, FTP, and telnet applications, and the Quarterdeck Mosaic browser. InterSuite runs on Windows 95 and Windows NT platforms and includes a sign-up utility to let users establish an Internet connection through Netcom, PSI, UUnet, Portal Information Network, or 70 other providers.

Quarterdeck also introduced WebServer, a $130 World-Wide Web server that runs on Windows PCs, and a $99 HTML authoring package called WebAuthor that works within Microsoft Word for Windows. For more information, write to info@qdeck.com, call (310) 314-4263, or visit http://www.qdeck.com.

SOFTWARE VENTURES HAS RELEASED INTERNET VALET, A $49 Internet suite that allows Macintosh users to connect to the Net via PSI. The package includes the MacTCP and MacPPP software required to access the Internet. It runs on 6800-series computers and is optimized for the Power PC. For more information, send e-mail to valet-info@svcdudes.com, call (510) 644-3232, or visit http://www.svcdudes.com.

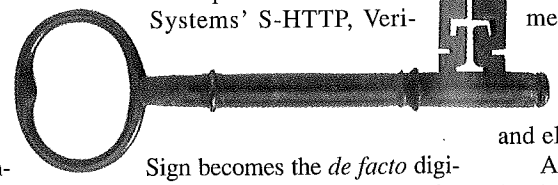
WOLLONGONG HAS FIELDED EMISSARY, A $99 Windows object-oriented program that combines e-mail, Usenet news, FTP, telnet, and a World-Wide Web browser in a single tool with a common interface.

Emissary allows you to incorporate images, sounds, and links to other documents directly into e-mail messages. A Web page's URL can be placed in a message so another Emissary user can click on it to bring up the page. The package is based on Wollongong's Client Object Linking Technology (COLT), which allows seamless integration of various Internet tools, although other software can be linked to Emissary using OLE 2.0. If Emissary doesn't recognize a particular type of file or tool, it connects to Wollongong's computer to check a database to find the appropriate software.

Emissary also is available in a $199 Desktop Emissary version, which offers LAN-based connectivity. For more information, write to sales@twg.com, call (415) 962-7100, or visit http://www.twg.com.

New ID for RSA Division

RSA Data Security, the leading provider of digital encryption software, has spun off its certification division into a new company called VeriSign. Backed by Ameritech, Mitsubishi, and Visa International, among others, it will handle the distribution of Internet users' digital IDs. Like driver's licenses, these can be used to prove identity, and VeriSign seeks to become "the DMV for the Information Superhighway." Because RSA holds the patent on the cryptography technology underlying the two key encryption standards on the Web—Netscape's SSL and Terisa Systems' S-HTTP, VeriSign becomes the *de facto* digital ID registration company for the Internet.



"Within electronic commerce, VeriSign provides the trust that's needed for cryptography," said Web Augustine, vice president of marketing and business development for the company. Said Netscape's vice president of technology Marc Andreessen, "Services such as VeriSign's are the essential complement to the software solutions we provide customers for secure information exchange and electronic commerce."

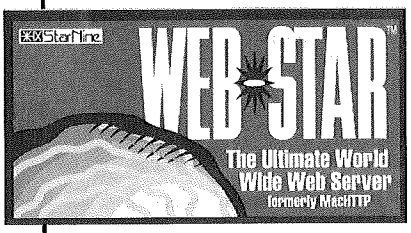
Apple, Netscape, and Sun have announced that they will integrate digital IDs into their software offerings. According to Augustine, "Our approach is that we'll be glad to support anything that is a market standard." For more info, contact VeriSign at **info@verisign.com** or call (415) 508-1151.

ET CETERA

Premonos Corp. (Concord, Calif.) has announced a suite of software and services that will let companies extend their EDI (electronic data interchange) applications to the Internet. Called Templar, the package sits between e-mail and EDI applications and allows for transfer of electronic information over the Internet. For more info, call (510) 602-2000 or visit http://www.premenos.com.

Progressive Networks announced the release of RealAudio, a client-server software system that allows users on the World-Wide Web to hear audio files in real time. The RealAudio system consists of a RealAudio Player and RealAudio Server; the former allows you to hear audio files created by the latter. For more information and to download the player, visit http://www.realaudio.com.

While most of the new Web servers being introduced are for Windows and Unix machines, Mac users need not despair. StarNine has released Web-Star, a $795 Web server that can run native on PowerMacs. The server, which takes advantage of Apple's Thread



Manager to increase access speed, offers full HTML support and can serve Adobe Acrobat documents. It comes on a CD-ROM that includes an expanded set of CGI scripts as well as a complete HTML authoring suite. For more info, visit StarNine's Web site at http://www.starnine.com or send e-mail to sales@starnine.com.

Prospero Systems in San Francisco has released Global Chat, software that enables live interaction on the World -Wide Web. The program, which lets you add graphics and sound clips to text chat sessions, is available for noncommercial use for free from http://www.prospero.com/globalchat.

Internet News



AT&T A NATIONAL PROVIDER

AT&T on the Net

AT&T announced that it was partnering with Bolt, Berenak and Newman (BBN) to become an Internet service provider to businesses nationwide. The service will start by providing dedicated access for Fortune 1000 corporations and eventually will be extended to small and medium-size businesses. On August 1, AT&T and BBN will begin offering Internet services ranging from simple connectivity to full consulting services in selected markets across the United States. On September 1 they will expand to national coverage.

The partnership, which is expected to generate more than $120 million for BBN Planet over a three-year period, combines AT&T's networking capabilities with BBN's expertise in Internet connectivity. The two companies will jointly develop new customer services.

IBM'S ENTERPRISE INTERNET

IBM has announced an enterprise Internet initiative that allows its entire family of computers to be Web servers—including mainframes, minicomputers, Unix workstations, and PCs. IBM also is providing gateways to enable two-way data sharing between mainframe and minicomputer databases and the World-Wide Web. This would enable large, medium, and small companies to integrate the Internet into their computing infrastructures. IBM also is offering security solutions and consulting services.

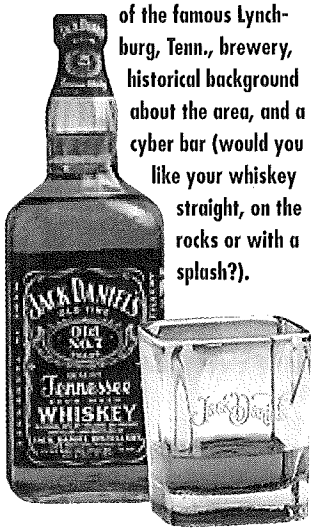
IBM's Web server line will include Internet Connection Servers for its OS/2, OS/400, AIX, and MVS platforms. OS/2 and AIX servers are available now, while AS/400 and MVS servers are slated for 1996. The CICS gateway can be previewed on the Web at http://www.hursley.ibm.com, **and beta code for the DB2 WWW Connection for AIX and OS/2 can be downloaded from** http://www.orolab.ibm.com.

For more information, call (914) 766-1119 or send e-mail to mikeking@vnet.ibm.com.

NEW ON THE NET

WHISKEY MAKER JACK DANIELS IS LOOKING TO SERVE YOU A DRINK

A virtual shot, of course. Check out the site at http://www.infi.net/jackdaniels, **where you'll find a tour of the famous Lynchburg, Tenn., brewery, historical background about the area, and a cyber bar (would you like your whiskey straight, on the rocks or with a splash?).**



Sun Brews HotJava

HotJava, the new World-Wide Web browser from Sun Microsystems, will soon be available to make the Web more interactive. Designed to work with an extension of the Hypertext Markup Language (HTML), and including a new programming language called Java, HotJava allows users to run special programs that can add animation to home pages, play sounds as a page is loading, and enable other interactive features. If a user encounters a new file or image type, HotJava will seek out the appropriate viewers and players.

The browser, which runs on Solaris, Windows NT, Windows 3.11, Windows 95, and the Macintosh operating system, derives much of its power from the use of extensions—software code written by third parties to enhance the original product, thus allowing HotJava to evolve its capabilities over time. Several of the extensions are already available from the Sun Java site (**http://java.sun.com**).

"Compiled Java programs are roughly the size of text pages," said Mark Scott Johnson, a senior software engineering manager at Sun Microsystems. "They are considerably smaller than many other media types."

Said MIT developer Nathan Williams, "Distributed-code execution is a very exciting concept that should have hit the mainstream a long time ago."

ET CETERA

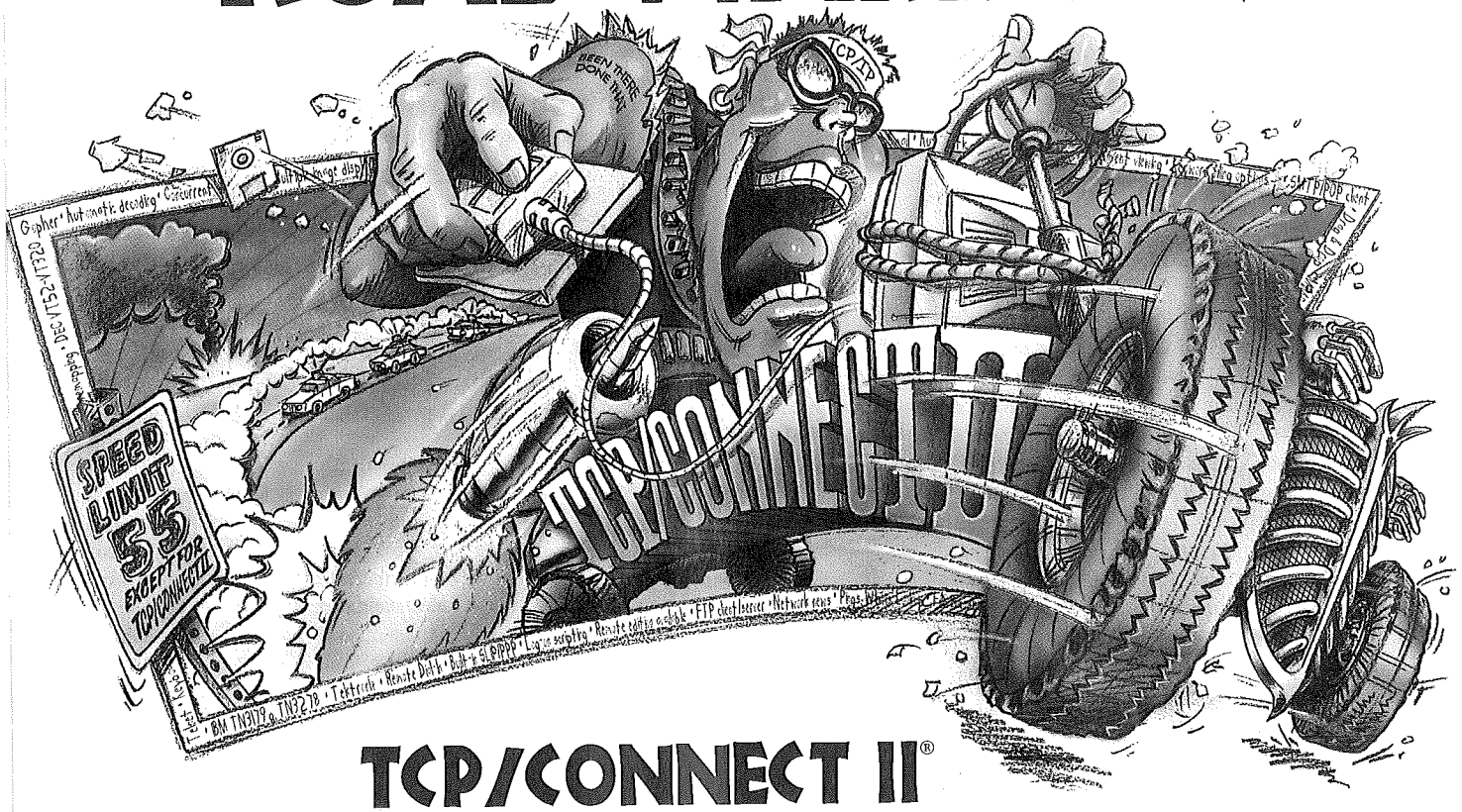
Netscape Communications Corp. filed for an initial public offering of 3.5 million shares of common stock. No specific pricing or plans for the money were announced. Netscape can be reached at info@netscape.com **or (415) 528-2802.**

Netscape rival Spyglass, which enhances and licenses the commercial Mosaic browser, went public with an initial offering of two million shares at $17 a share. Its common stock trades on Nasdaq under the symbol SPYG. For more information, call (708) 505-1010 or visit http://www.spyglass.com.

Lotus Development Corp. announced the availability of InterNotes Web Publisher and InterNotes News products for OS/2 and Windows NT. The $6,589 Web Publisher runs on the Windows NT platform and enables users to publish Notes applications to the Internet by converting Notes databases and documents to HTML format. InterNotes News, which sells for $2,199, allows Notes users to participate in Usenet newsgroups from within the Notes environment. For more information, call (800) 828-7086.

Internet service provider Performance Systems International (PSI) announced that it had signed a letter of intent to acquire software developers InterCon Systems Corp. and Software Ventures Corp. for $30 million in stock. InterCon is the maker of the aging TCP/Connect II Internet application suite for Macintoshes and its newly launched NetShark line. Software Ventures produces the Microphone communications program and Internet Valet, a new Internet suite for the Mac. For more information, call (800) 872-8649.

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CRUISE THE INTERNET IN THE FAST LANE.

CIRCLE NUMBER 41

 By Andrew Kantor

LADIES AND GENTLEMEN, START YOUR ENGINES

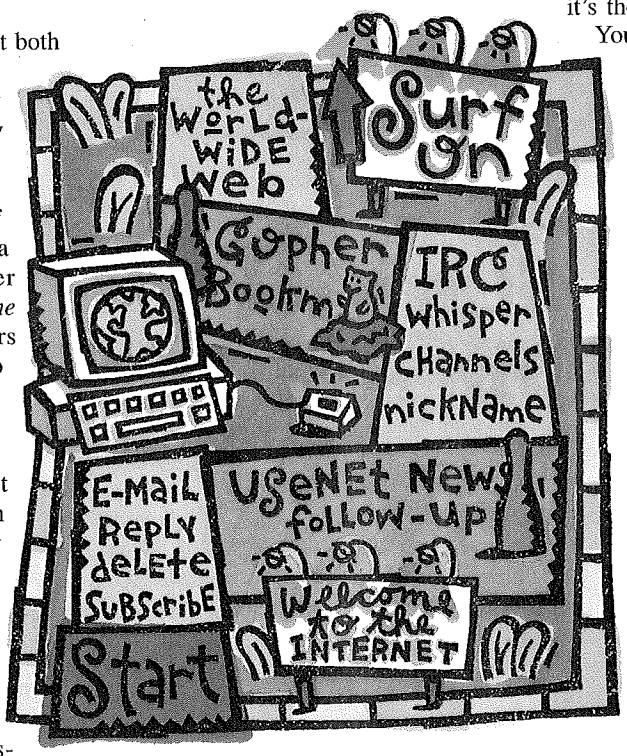
You're connected to the Internet and ready to go. But where do you begin?

GETTING CONNECTED TO THE NET IS, OF COURSE, only the first step in a journey online. Once you've found a provider, chosen a connection type, and signed up for service (see "Jack In and Geek Out" in July *IW*), you're ready for the next step. And it's a doozy. You've heard of all the things you can do—send messages, converse with millions of people, surf the World-Wide Web, and more. You suddenly find yourself facing an uncertain Net. Where do you start?

First, buy a book. You'll want both a beginner's guide and a more robust reference book, especially when you run into one of the many roadblocks you're likely to encounter. There are a lot of books out there, and there are a lot of mediocre books out there. For a basic guide I recommend Peter Kent's *The 10-Minute Guide to the Internet* (Que; $12.95). It covers everything you need to know to get started and get going with all the Internet's tools, and is likely to be updated soon.

The best all-around Internet reference book is Harley Hahn and Rick Stout's *The Internet Complete Reference* (Osborne/McGraw-Hill; $29.95). It's the book to keep at your desk while you're online. Two other excellent books are Kevin Savetz's *Your Internet Consultant* (Sams; $25), which uses a question-and-answer motif to tell you just about everything you ever wanted to know about using the Net; and *The Internet Unleashed* (Sams; $44.95), which is a more in-depth work, suitable for people who want to know everything about the Internet. But, at over 1,300 pages, it's overkill for most casual users.

Once you have a trusty book by your side, you're ready to hit the keyboard. The Net can be broken down into a bunch of separate tools, so getting up to speed is a matter of getting comfortable with each of them. I'm not going to tell you how to use them all—Usenet News software alone varies too much, and I only have two pages—but I will tell you what you need to know how to do with each of them. Think of it as an Internet drivers' test.



E-mail

Electronic mail is the most popular thing to do on the Net and it's the first thing to get up to speed on. You should know your e-mail address; if you don't, ask your system administrator. (Some examples are **ak@panix.com**, **kbaxter@unix1.cc.newton.edu**, and **kbaxter%art@mail.bigcorp.com**.) Then practice sending a message: Get a friend's e-mail address or send a note to President Bill Clinton at **president@whitehouse.gov**. You can even send a message to yourself if you don't know anyone else. The point is to get familiar with your system's mailer, whether it's Pine, Elm, Eudora, Pegasus, or any other program.

You may also want to subscribe to some mailing lists. Look in Pointers (pg. 126) and subscribe to one of the lists there for practice (or look at back issues of *Internet World* for suggestions). Once you're comfortable reading the incoming messages, send one to the list and join in the conversation.

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Illustration by Matt Wawiorka

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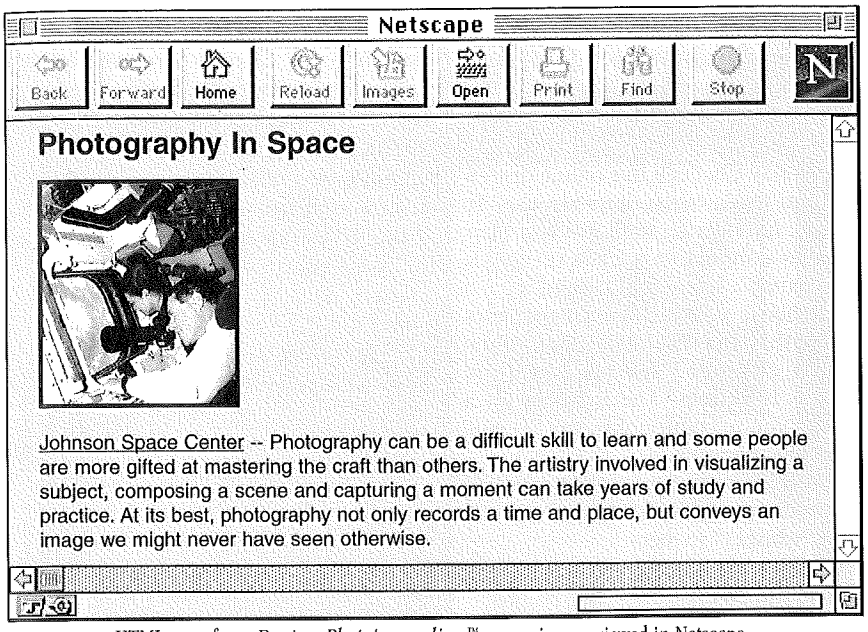
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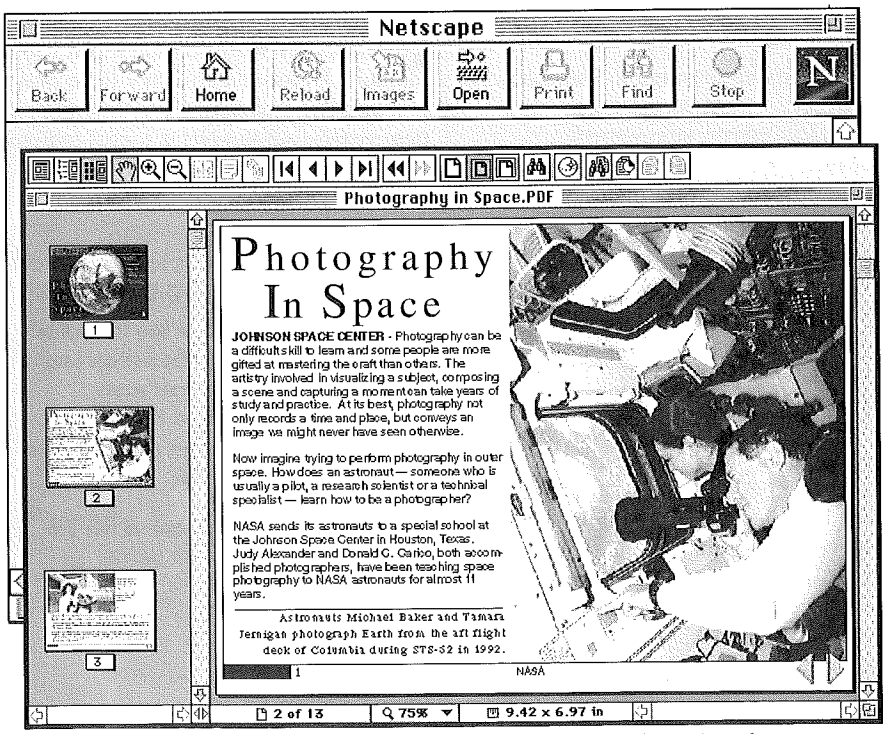


COMMONPLACE.



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COMPELLING.



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CIRCLE NUMBER 1

Usenet News

Once you have the basics of mailing down pat, you can move on to the next largest method of communicating on the Internet: Usenet News. Neither Unix-based or graphical newsreaders are the easiest tools to use, so it pays to spend some time learning how to use them properly.

First, check out the list of available newsgroups—either by looking at your .newsrc file (Unix-based newsreaders) or by choosing the "Get All Newsgroups" or similar command (graphical newsreaders). Pick four or five groups that sound interesting and subscribe to them. You probably don't want to subscribe to more than a few until you're more comfortable with Usenet. Make sure to include **news.announce.newusers**.

Once you pick some newsgroups, start your newsreader. You're going to be faced with a lot of old messages because it's your first time there. Most newsreaders will allow you to mark all the news items as read, sometimes called "catching up". Do this if you can; it will save you the trouble of facing and sorting through several hundred messages in each group. But whether or not you can catch up, browse through the groups to which you've subscribed, marking and reading the messages and threads (groups of messages on the same topic) you find interesting.

If you want to try writing your own messages, post to one of the test groups such as **alt.test** or **misc.test** first. If you're successful, you'll receive automatic e-mail from around the world from computers that read your message. Before you post to a real newsgroup, find and read the group's FAQ (Frequently Asked Questions) file to make sure you aren't asking a rudimentary question. Internet users can be prickly and vocal ("That belongs in alt.kittens, not alt.cats, you moron!") so take the time to learn the culture.

You know you're proficient with Usenet News when you can do the following:

- Subscribe to a new newsgroup and mark all the old posts as "read" (so you don't have to read a thousand old posts your first day).
- Check out what new posts there are in the groups you've subscribed to.
- Read selected posts in a group.
- Reply to a post via e-mail making sure to include the original text.
- Reply to a post in the newsgroup ("follow-up") and include text from the original post.
- Forward the post by e-mail to someone else.
- Save the text of a post in a file.
- Unsubscribe a newsgroup.

You know you're *really* proficient with Usenet News when you can select and decode a multi-part binary post (an image) from a newsgroup like **alt.binaries.pictures**.

IRC

Internet Relay Chat is a live online discussion forum that's fairly simple to use. To start it up, try entering **irc** or **ircII** at a Unix prompt to connect to a chat server. If you're using a graphical client, you'll have to choose a server; it's usually automatic with Unix-based clients. Then choose a channel—**#hottub** is a good choice, as is **#irchelp**—and listen in for a bit. When you're comfortable, say "Hello" and see what happens.

You'll also want to practice sending private messages to someone in case you want to "whisper" to them.

You know you're proficient with IRC when you can do the following:

- Start your IRC client and connect to a server.
- Choose or change your nickname.
- Get a list of channels; get a list of channels with between 10 and 20 users.
- Join a channel.
- Send a message to the others on the channel.
- Send a private message to someone else on IRC.

Gopher

Gopher is so simple, everyone should know how to use it. Start it by typing **gopher** at your Unix command prompt or clicking on the Gopher icon if your interface is graphical. Then, using your mouse or keypad, pick something interesting from the first menu you see. (If you're using a text-based version, choices that lead to more choices end in a slash, and choices that are readable files end with a period.) Learn how to go forward and back in the menus, and, of course, how to quit. You'll also want to save some of the information you find and practice mailing it to other people (or yourself).

You know you're proficient with Gopher when you can do the following:

- Start Gopher at the server of your choice.
- Go deeper into a menu and go back.
- Save the text of an item in a file.
- E-mail the text of an item to someone.
- Find Veronica and search for something successfully.
- Save a Gopher location as a bookmark.
- Go back to a bookmark you've created.

The World-Wide Web

Like Gopher, the Web is a fairly simple system to use. Start up your Web browser and begin exploring from whichever page it presents. Then pick a page—one you've heard about or read about—type in its address, and check it out. You also can change your default startup page to something like Yahoo or the WebCrawler. Beyond that, the Web is easy. Surf around, add cool pages to your hotlist, and enjoy.

You know you're proficient with the Web when you can do the following:

- Tell your browser to go to a specific page (try **http://www.panix.com/~ak**).
- Follow some links from there.
- Go back to a previous page.
- Save the location of a page to your hotlist.
- Go to a location on your hotlist.
- Save the contents of a page.

Don't expect to get up to speed in a day. Like anything worthwhile, using the Internet—at least productively—takes time. Many people expect to turn on their computer for the first time and download information from all over the world within minutes. Unfortunately, they'll be disappointed. But if you take the time to practice, you'll find the Net a useful tool and an enriching experience. ■

FINDING PROVIDERS

Since July, when I told you how to "Jack In and Geek Out," some of the methods I suggested for finding an Internet access provider have disappeared. Have no fear; there is an easy way to get a comprehensive list of providers via e-mail.

Send—or have a friend send—a four-line e-mail message to ftpmail@decwrl.dec.com **that reads:**

```
connect ftp.colossus.net
chdir /
get list
quit
```

You'll get a set of files that, combined, make up The List: a huge list of access providers sorted by area code.

Andrew Kantor (ak@iw.com) is senior editor of Internet World.

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Transparent Updates

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Web Server
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VRML & Java Support
CGI Web Server API
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CIRCLE NUMBER 35

the Surfboard

There's none so blind as he who will not surf.

BY ERIC BERLIN AND ANDREW KANTOR



A Prayer for Rex and Tweety

Let us now please have a moment of silence for the beloved cats, dogs, birds, and frogs memorialized at **http://www.lavamind.com/pet.html**, the Virtual Pet Cemetery. From "Geordy," the cockatiel trained to say "Riker sucks," to the variety of toads squashed by Steven Hoffman as a child, the Pet Cemetery is here so you can share the memories of your beloved and late animal friend. It's also there so you can buy actual tombstones for $19.95 and more from Benchmark Distributors of Kennedale, Texas; credit cards gladly accepted.

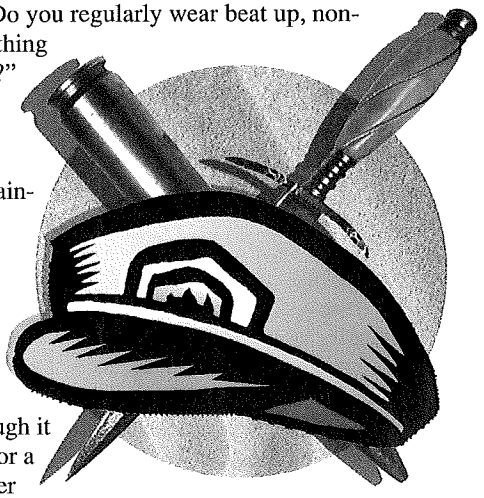
Not that they're trying to capitalize on your pet's death. Mercy, no. Online epitaphs are free. Just send your eulogy to **pet@lavamind.com**. They reserve the right to reject offensive contributions, so if you happen to be glad your cat is dead you might want to keep that bit of news to yourself.

Stop! I'm Armed and Paranoid!

Yes, the U.S. is the most violent and crime-ridden nation in the history of the world. But fear not—the Nashville, Tenn., police department is here to help. Police Lt. Ken R. Pence and the rest of Tennessee's finest have developed several tests (at **http://www.nashville.net/~police**) to let you know just how vulnerable you are. Might you be murdered, raped, robbed, stabbed, shot, or beaten? It's best to know ahead of time, we think. (But Ken advises, "Don't take this test with your spouse or lover present" and he suggests that you "Close the door when you take the rape, robbery, stabbed, shot, beaten test so you can get a fair assessment.") Comforting, isn't it?

Starting the fun is "Are you gonna be murdered?" with questions like, "Does your local police department have a Hostage Negotiation Team?" and "Does your local police department have a S.W.A.T. Team?" You also have to be concerned whether "all of your family members [are] trained, and do you have a loaded firearm within 15 feet of your person?" (We assume a gun rack in the pickup truck counts in your favor.) And, of course, "Do your family members or employees use code words in times of distress?" ("The network is down! Repeat—the network is down! Send help!")

"Are you gonna be raped, robbed, stabbed, shot, or beaten?" asks whether you ever "open your door to strangers when you are unarmed," and whether you "walk in public more than five times per month." The "Are you gonna be arrested soon?" portion asks, "Do you regularly wear beat up, non-fashionable clothing while in public?" Driving a bright-red car also hurts your chances of remaining free in Nashville, it seems.



We don't think the good citizens of Nashville are paranoid, although it might be time for a Valium dispenser in the police department. And it can't make people feel safe about visiting the Grand Old Opry either. (at least if your jeans are torn). Next month: the New York City Police Department's version. ("Do you always wear your Kevlar vest in public?")

Please, Mr. Mail Bot

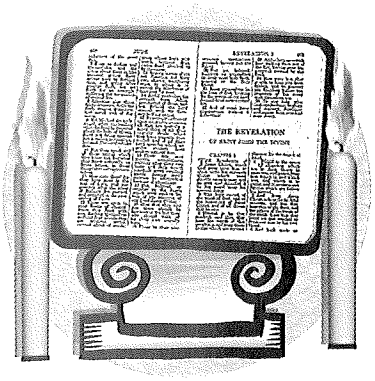
From time to time we've told you about ways to get all sorts of useful and useless information by e-mail. We've found another entry in that category: the E-Mail Infobot (**infobot@infomania.com**). Among other things, the Infobot lets you look up weather and trivia information about any day of the year, find ham radio call signs in any ZIP code, search a CD music catalog, get the latest weather, and a *lot* more.



Send a message to the Infobot with a subject of **help** and you'll get a list of all it can do and info on how to do it.

One of the things you *can't* do with the Infobot is get daily television listings, but that's taken care of by What's On Tonite!, which will e-mail you the day's programming. Just send a message to **circulation@paperboy.com** with no subject and the message **subscribe *edition Your Name***, where ***edition*** is either **eastern, central, mountain**, or **pacific**.

ILLUSTRATED BY PAMELA HOBBS



Seek and Ye Shall Surf

Next time you need to sermonize, prime yourself on the Net first. Take a look at PresbyNet—telnet to **pcusa.org**.

Besides talk, there are some great databases, including resources for sermon-writing, as well as a place where you can collaborate with others trying to think of something pithy to say on Sunday.

PresbyNet is just one branch of EcuNet, an umbrella group of religious organizations coming together online. That same telnet address can take you to the online headquarters of plenty of other denominations, including the Baptists, Lutherans, and even the Quakers. Shamash, an online Jewish organization, isn't at the EcuNet site, but you can catch up to them at **http://shamash.nysernet.org**. Since we're on a roll, you can also find the CyberMuslim, complete with an online Qur'an in several different languages, at **http://www.uoknor.edu/cybermuslim/cy_about.html**. Gee, maybe we can actually start to understand each other, thanks to a little bit of networking.

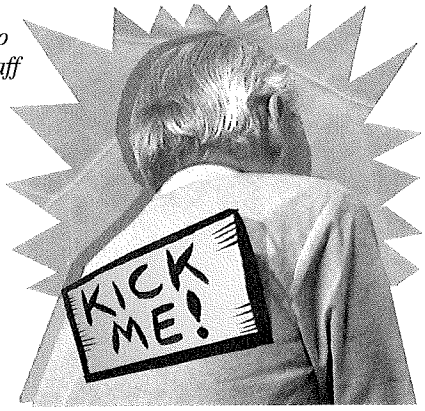
A Terrible Thing to Waste

We're all for making the Internet easier to use (not that we don't like Unix, but we'll take Eudora over Pine any day), but there's something to be said for keeping things complicated. At least it keeps out some of the would-be spammers. Take the example of "Donald," a newbie on WolfNet in Seattle. Donald, after setting up his SLIP account, called WolfNet's tech support to ask the following question: "How can I send my business advertisement to the entire Internet?"

The support person politely told him this was not such a good idea, as it was the online equivalent of taping a large KICK ME sign to one's own back. Donald was a little peeved at this lack of assistance, so he hung up and, we suppose, tried to figure things out for himself. He summoned up his newsreader, and—because it was the first time he ever used it—the software immediately began loading the list of newsgroups to his computer. There are, as you well know, a lot of newsgroups, and we can be pretty sure that Donald did not have a blazing-fast modem. The process took so long that he finally decided that his Internet provider was, in fact, exacting revenge—flaming our hero, as it were, because he had asked a perfectly legitimate question. The nerve!

So Donald posted to a local newsgroup:

"So now, as a newbie, I have asked where I can post a simple ad for my company for a Business Opportunity . . . [it] seems as though I had to be FLAMED by Wolf staff by downloading every News site on the [Net]. Sure I was getting a little testy and frustrated, but I did not deserve to be flamed...."



What scares us is that someone probably filled this guy in, giving him knowledge he is ill-equipped to use. We hope he isn't too determined to publicize his "Business Opportunity," but perhaps someone should alert the Cancelmoose, anyway. We may need a pre-emptive strike.

Turnabout Is Fair Play

Suck in those guts, men, and tighten those rear-ends. Last month we told you about the ever-more-controversial Babes on the Web page (**http://www.tyrell.net/~robtoups/BABE.html**), where women's Web page photos are rated according to the author's babe-ometer. Well, Babes on the Web II is here, and this time it's girls' night out.

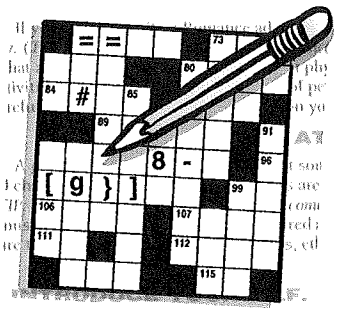
This sampling of beefcake on the Web rests at Blake Kritzberg's page at **http://ucsub.colorado.edu/~kritzber/new/babes.html**. Her rules for being included are fairly simple, including, "Babes in Babes II must be men, or something near."

The only thing topping Babes II is the Babes II Mailroom, where letters from both friends and foes reside and are subject to a healthy—and public—dose of sarcasm from Blake (who is, judging by her "cheesecake photo," herself a babe).

We're waiting our turn.

A Six-Letter Word for :)

Emoticons have officially entered the English lexicon. No, they haven't made it into the dictionary. But they *did* make it

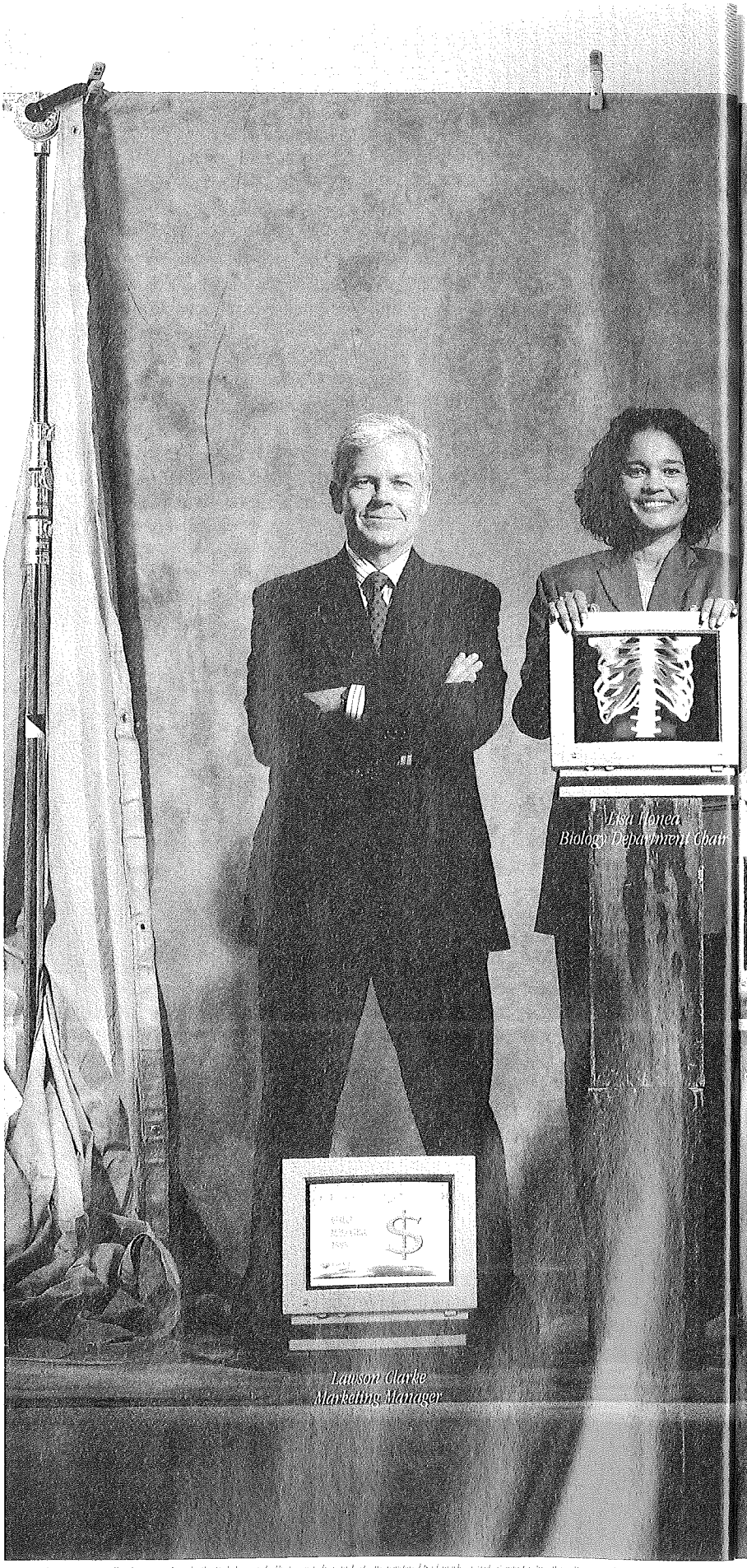


into *The New York Times*'s Sunday crossword puzzle on May 21. If that isn't official acceptance, we'd like to know what is.

Basically, crossword aficionados woke up to find that some of the clues in their Sunday crossword were not words, rather a variety of symbols like `8(:o)`. Instructions on the puzzle told non-Internet-savvy puzzle solvers to turn their heads sideways, but we know that *you* folks wouldn't need such simplistic hints. These weren't simple smilies, either. They were along the lines of `==}:‡]]` (Abe Lincoln), of course, `I8-#)""'` (Groucho Marx), and `[g-}]` (Colonel Klink). And if you're wondering, that first symbol is an extreme close-up of Mickey Mouse. Go figure. ■

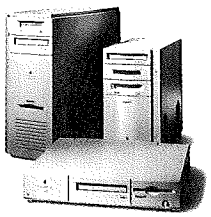
Eric Berlin (eric@panix.com) is a New York-based freelance writer and playwright. Andrew Kantor (ak@iw.com) is senior editor of Internet World. *They have been known to open their doors to strangers while unarmed.*

Looking for a compelling reason to set up an Internet Web site? How about the fact that you don't have to be a propellerhead anymore in order to actually do it?



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AROUND THE WORLD IN 60 SECONDS

The Internet allows you to travel the world at warp speed without a passport, suitcase, or jet lag—and without moving from your chair.

THE WORLD IS SHRINKING. INCREASINGLY WE MUST think in terms of a global community. Nowhere is that more true than on the Internet, where you may be in Sweden one minute while the next link takes you to Japan.

Unfortunately, we all tend to see our own home as the center of the universe. Thus, I use the word "government" to mean the U.S. federal government, and when I refer to the "next big election," I have the 1996 presidential election in mind. And I expect the sites I visit to be in English. It's not that I set out to be obnoxious; I simply have to step out of my world to realize that not everyone is coming onto the Internet through the same path.

I visit other countries all the time—on the Internet that is. Following are a few places I visit to obtain information that isn't U.S.-centered. They are international sites that are valuable from a researcher's point of view. Some are located in the United States but are good sources of international information. Many of these places are still under construction, so be patient if you run into delays.

Starting with the United States' northern neighbor, there are many Canadian sources of official information on the Internet. You can reach the Canadian Embassy in Washington, D.C., at **http://www.nstn.ca/wshdc**. Choose French or English. You'll find fact sheets, Canadian foreign policy, and immigration information. My favorite feature is Newscan, a weekly compilation of newspaper coverage across Canada. There's also information on tourism and links to other branches of the Canadian government.

The Canadian Parliament can be found at **http://www.parl.gc.ca**. It also lets you choose information in French or English. Besides government info, it offers the score and history of the national anthem, *O Canada*. (You can also listen to it via a sound file.) There are links to related Gopher sites, and you can take an online tour of Canada's Parliament.

France also has an online embassy (at **http://town.hall.org/travel/france/embassy/index.html**), which fortunately is in English. You'll find a fascinating history of French diplomacy as well as an overview of the modern organization. There also is a description of French artwork currently on display in La Maison Français de Washington. Unfortunately, there are no graphics.

For an image-filled tour of the French capital, however, visit the Paris site at **http://www.paris.org**, where you'll find picture after picture of the City of Lights. Designed for the tourist rather than the serious researcher, it nevertheless offers some history and useful facts. And it's pretty.

Jumping continents, a South African site offers many ways to find information about the African National Congress (ANC) at **http://www.anc.org.za**. For non-Web users, you can access the site by gophering to **gopher.anc.org.za**, and via FTP at **ftp.anc.org.za**; look in the **/anc** directory.

The ANC has placed its constitution, press releases, and history on the Internet. You'll also find the biography and speeches of Nelson Mandela. The Human Rights Committee documents are available, but they are arranged by date, which makes searching more difficult. There also are links to other African Gophers. If you want constant updates on ANC news briefings, you can find them at **http://minerva.cis.yale.edu/~jadwater/anc**. For a great new visually appealing Web page, check out **http://www.ctcc.gov.za**, a well-linked virtual tour book of Cape Town that is good as Fodor's.

In Morocco's Web site at **http://www.dsg.ki.se/maroc**, you'll find a map of the country and guides to the indi-

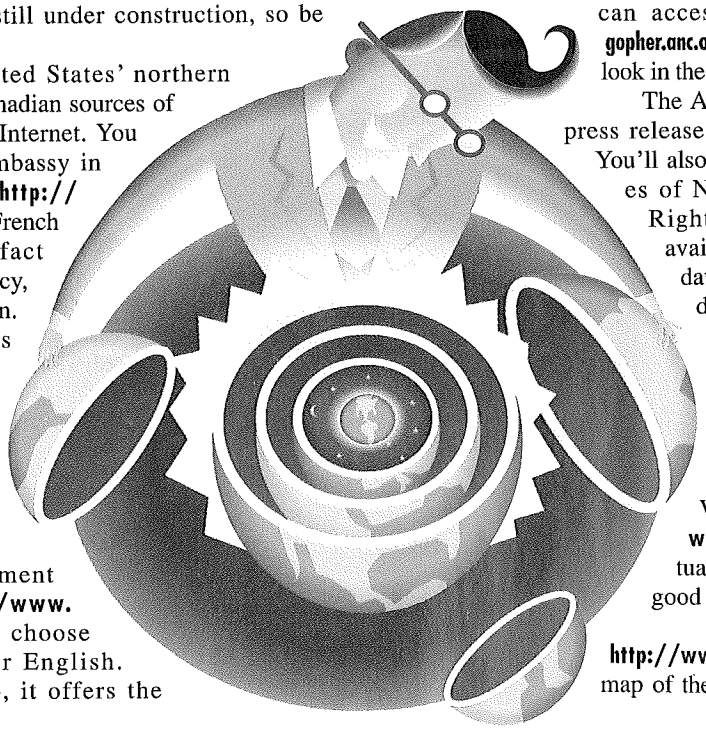


Illustration by Dan Hubig

vidual regions. There's also a history of Morocco, practical information, and a cultural guide accentuated with many bright pictures.

Moving east, Israel has made a lot of information available to the Internet community. Travel to the Israel Information Service at **http://www.israel.org**. Listen to the welcome, then move across the colorful screen to find discussion of Israel's history, land, culture, economy, and more. You can view images of Jerusalem and other historical spots. There also are government documents and information about Israeli embassies and consulates around the world. Some of the information is in French, Spanish, and of course, Hebrew. If you can't find what you're looking for, you can send questions to a staff member of the Israeli Information Service.

If you prefer to peruse the Internet through Gopher space, gopher to **israel.nysernet.org**, where you'll find an extensive list of Israeli sites. You can propel yourself to a good deal of information from this launching point.

Continuing east, an Indonesian index can be found at **http://www.cs.utexas.edu/users/adison/cgi/bimasakti**. Self-described as the "Indonesian Yahoo," you can choose a category of interest and follow the links to the related page. You also can search by keyword. There is a guest book to sign if you want to leave your mark.

To catch up on events in China, travel to **http://www.hk.net/~drummond/milesj/china.html**. This page includes news that originates in China and other parts of the world. Most of the site is in English, but there is a guide to reading Chinese. You can also find statistics on the Asian stock markets. The site is mostly text, with few graphics, so it packs a lot of data into its pages.

A Hong Kong Web page is located at **http://www.hongkong.org**, where you'll find the history of Hong Kong, tourism and government information, and text of speeches. There also are guidelines for doing business in Hong Kong. The site provides daily news briefings and a monthly newsletter, which is archived so you can read back issues. Most of the news is economic and statistical.

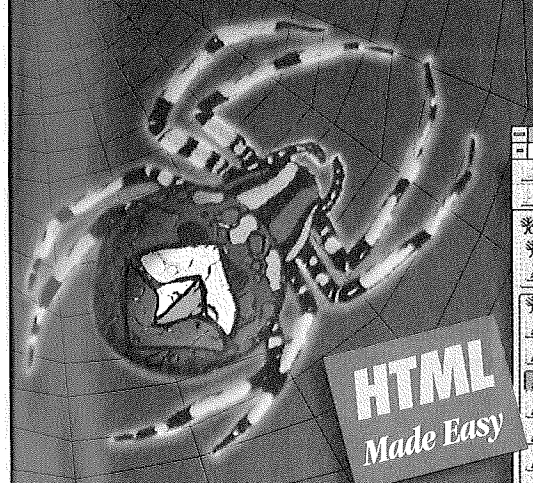
Across the ocean and onto Brazil at **http://www.escape.com/~jvgkny/Brasil.Web.html**. This page offers a spelling tutorial and links to sites that offer information in Portuguese or English. There's a wealth of information, including the map and flag of Brazil and a rain-forest guide. There also are links to individual Brazilian states that have their own Web pages. The site offers travel tips, currency exchange rates, cultural material, and news about Brazil.

These international sites are only a sampling of what's available on the Internet. Most of those mentioned were chosen because I've been to them before. If you're looking for a country not mentioned above, a good launching point is the International Network Information Center at the University of Texas. To get there, gopher to **inic.utexas.edu**. The site consists of an Asian Network Information Center (ASNIC), Latin America Network Information Center (LANIC), Middle East Network Information Center (MENIC), and Russian and East European Network Information Center (REENIC). These networks will help you find academic and news sites for a host of countries. You can also access the INIC on the World-Wide Web at **http://inic.utexas.edu**. And of course, there's always Yahoo; check out **http://www.yahoo.com/Government/Countries**. ■

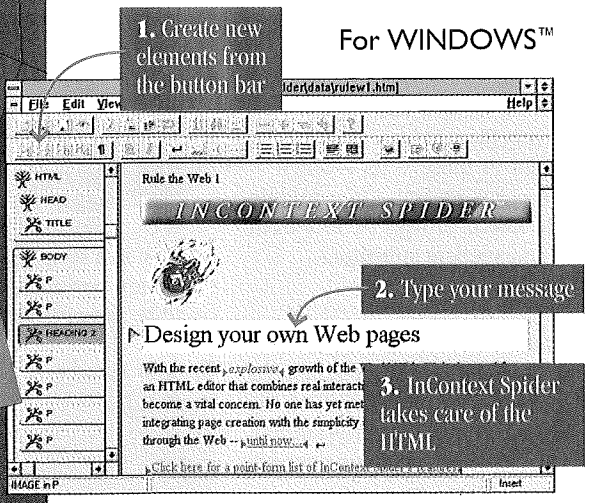
Cynthia N. James-Catalano (jamcat@gate.net) holds a master of science in library science and works as an editorial researcher at The Orlando Sentinel.

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CIRCLE NUMBER 79

CHEAP FIX

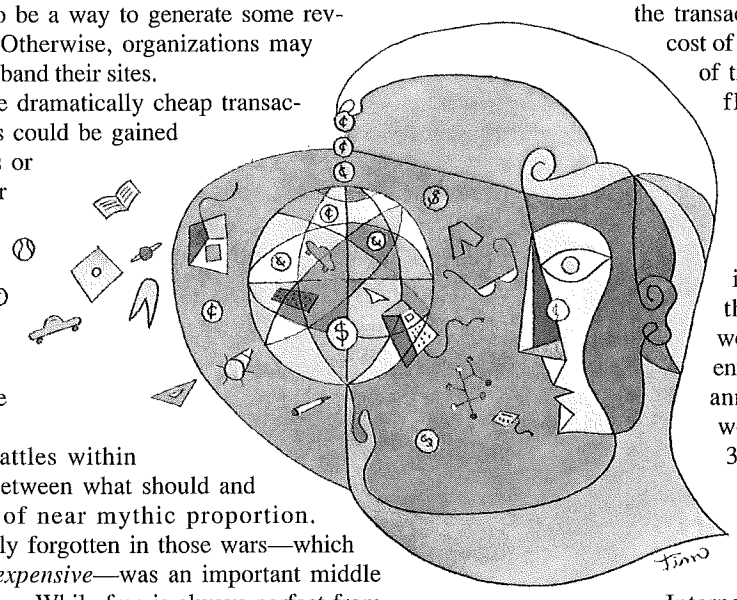
While everyone likes things for free, charging slight fees for services could keep many valuable Internet sites from fading into oblivion.

THERE'S A MURPHY'S LAW THAT GOES SOMETHING like, "Don't make perfection the enemy of the very good." An analogous statement can be made about free vs. cheap resources on the Internet.

Many people and organizations—particularly universities—have put valuable resources on the Internet without charge. But many of them cannot afford to maintain these sites and keep them free without some inflow of money to defray expenses.

Moreover, there is an ironic cause-and-effect principle operating on the Net: The more popular a free resource becomes, the greater the chance that it will disappear. This is because it is more expensive to operate and maintain a well-trafficked site. In the long term, there has to be a way to generate some revenues to pay the freight. Otherwise, organizations may have little choice but to disband their sites.

The solution could be dramatically cheap transactions. Significant revenues could be gained by charging mere pennies or fractions of pennies for access to information. What many site operators may fail to realize is that paying an inexpensive price for a service would not be unacceptable to vast majority of the electronic community.



The old dogmatic battles within the Internet community between what should and should not be free are of near mythic proportion. However, what was usually forgotten in those wars—which generally pitted free vs. *expensive*—was an important middle ground—the realm of cheap. While free is always perfect from the buyer's point of view, cheap is an excellent substitute.

Pittance Principle

As I pointed out in a previous column ("Who's Making Money on the Net?" in July *IW*), Frank Munsey in 1893 challenged magazine publishers by cutting the newsstand price of his *Munsey's Magazine* to 10 cents and the annual subscription rate to $1. This was a price reduction of two-thirds or more over his competitors' magazines.

In retaliation, the magazine distribution monopoly of the day refused to distribute his magazine. Munsey in turn relied on newspaper ads and created his own distribution company to circumvent the blockade. Using this cheap pricing concept, *The Ladies' Home Journal* reached a circulation of 750,000 by 1895—almost four times that of the previous leading magazine called *Century*.

Newspapers, of course, are past masters of the "cheap is better than free" philosophy. As George Gilder points out in his book *Life after Television*, the Internet has much in common with, and much to learn from, newspapers. However, on the Internet we should think in terms of prices that are at least two orders of magnitude less than newspapers (which typically sell for $.25 to $.75 daily).

On the Net, consider a charge of one-tenth of a cent or less as the standard price for utilizing a prized resource. The price may seem ludicrous at first glance, but when the cost of the transaction itself is virtually zero, the cost of access is near zero, and the level of traffic is high, the daily revenue flowing in at tenth-of-a-cent increments adds up to a viable source of support.

At 30,000 hits per day (on average), where each access costs a tenth of a penny, the daily income would be $30 a day. At that rate, over 365 days a site would realize about $11,000 in revenue. At one-half cent per hit, the annual revenue for the same site would be more than $50,000. At 300,000 hits per day, a site would generate $500,000 annually.

If this system were implemented as immediately as it could be, the commercial use of the Internet would generate some useful revenue in a simple, painless, and secure fashion. For a tiny sum of money per access (a micro payment), a valuable resource could be preserved for the benefit of thousands of users.

Greater Good

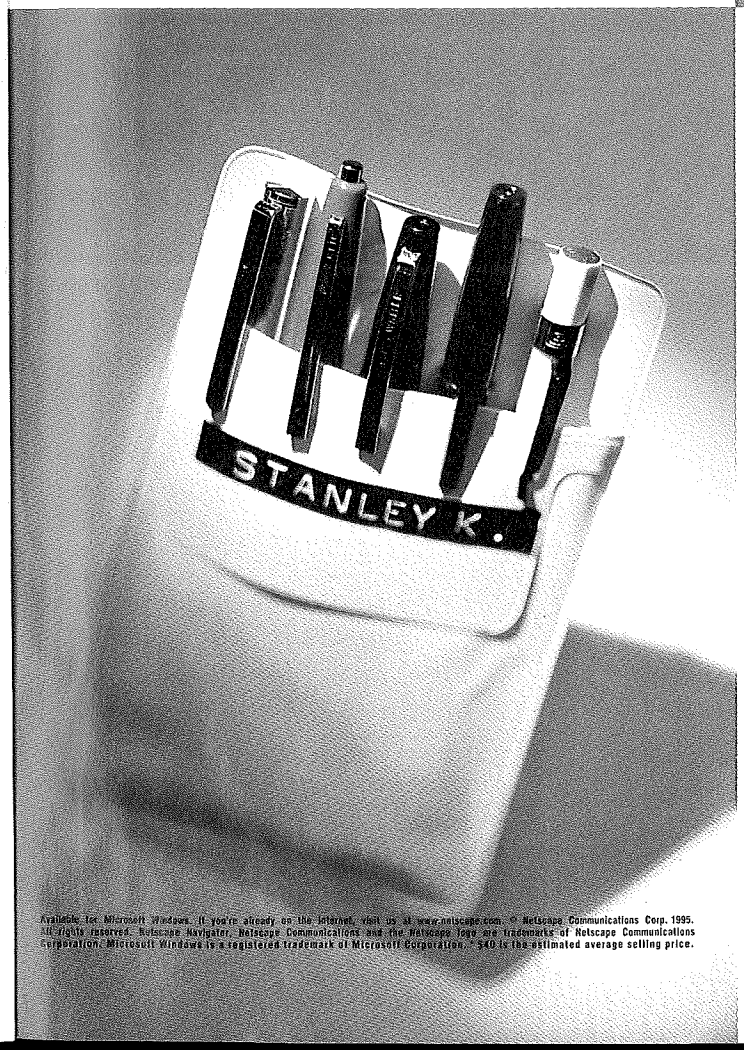
Knowledge in all its forms (data, images, and ideas) constitutes the basic raw material of the emerging information economy. By making it possible for knowledge to be sustained on the Net and profoundly inexpensive, it is possible that within a single generation the global literacy ratio would flip-flop from 60 percent illiterate to 60 percent literate. All we are waiting for is the launching of mechanisms that support the exchange of micro payments that are secure, anonymous, and ubiquitously available.

The commercial marketplace is clearly recognized as the

Illustration by Tim Clark

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driving force behind the phenomenal growth of the Net. To fulfill the promise of Internet commerce, a full-fledged commercial infrastructure must be established. And one of the key features of a marketplace is the simple and safe exchange of funds. Money has to pass directly or indirectly from the customer to the seller.

However, the real commercial opportunities of the Internet—especially in the relatively friendly domain of the World-Wide Web—will only be realized by seriously discounting and improving prices for businesses as well as customers.

Many prices of goods and services on the Net today seem inordinately high. "Buy cheap and sell dear" also is the model under which the proprietary online services—America Online, CompuServe, GEnie, and Prodigy (not to mention Dialog, Lexis/Nexis, and now the Microsoft Network)—generally operate.

If a venture on the electronic frontier seriously wants to attract your business, why doesn't that company offer prices that fully reflect the lower investment and overhead requirements for an Internet business? Why aren't cyberspace storefronts and malls beating the socks off the prices of conventional mall stores?

In a keynote address at the Spring Internet World show in San Jose, Gordon Bell, former head of the National Science Foundation and a person who played a key role in the emergence of the Internet, asserted that end users should have on-demand Internet data services at 25 Mbits per second for less than $50 per month *now*. That's not free, but it's a dramatically inexpensive price.

GORDON BELL, FORMER NSF HEAD, SAID USERS SHOULD HAVE ON-DEMAND INTERNET DATA SERVICES AT 25 MBPS FOR LESS THAN $50 PER MONTH *NOW*.

When we start to see Internet prices reflect the cost advantages of electronic commerce, we will see business transactions on the Net take off like a shot. Which businesses are going to try this new strategy and price their information services accordingly? And which mechanisms will work most proficiently in supporting tiny transactions? These are the key questions of the moment. To get the ball rolling, start looking for, asking for, and insisting on cheap goods and services on the Net.

Unmotivated Shoppers

Another concern about the commercial viability of the Internet has been the relative lack of buying and selling in a market that is hugely appealing to advertisers. It is well documented that the people using the Net (white males, primarily) are affluent, well-educated, informed, and so on. But they don't spend much money online. Why? Are these 25-to-55-year-old, well-heeled knowledge workers just surfing the Net and uninterested in shopping?

We often hear that people are too risk-averse to send their credit-card numbers over the Net. But is security (or rather lack thereof) all there is to it? It is more likely that Internet shopping is not attractive because the overall value, convenience, and selection of merchandise and services are not sufficient. Many of us want to touch what we buy or at least see it. And many people buy on impulse and according to habit and social needs.

As Peter Drucker observed long ago, for the advantages of a new and improved technological option to sufficiently outweigh the conventional way of doing things, it has to deliver a tenfold improvement. Until the new Internet mode of shopping is ten times better or easier than catalog shopping, most people simply will not abandon the older methods.

Other people speculate that selling on the Internet is not happening in a big way because the Net is only suited for promoting product presence and strengthening company visibility. But it needn't be that way. If cyberstores started competing seriously and pursuing heavy business traffic on the basis of price, comprehensive and up-to-date product information, speed, selection, and one-stop purchasing, shopping on the Net would take off quickly. ■

Bill Washburn (washburn@mecklermedia.com) is senior vice president of Internet business development at Mecklermedia Corp. He was formerly executive director of the Commercial Internet Exchange (CIX).



CIRCLE NUMBER 49

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http:// DNS URL blah blahblah html: WWW bl blah FTP blahblah oh yeah, TCP/IP and IPX blah CDIs and FAQs UNIX servers IP addresses blahBLAHblahblah Web browser SMTP or POP 3 mail blahb WAIS Protocol-dependent BLAHblahbla browse blah HyperText WINSOCK bl blah API MIME browse some more OLE domain name XOVR blahblah.



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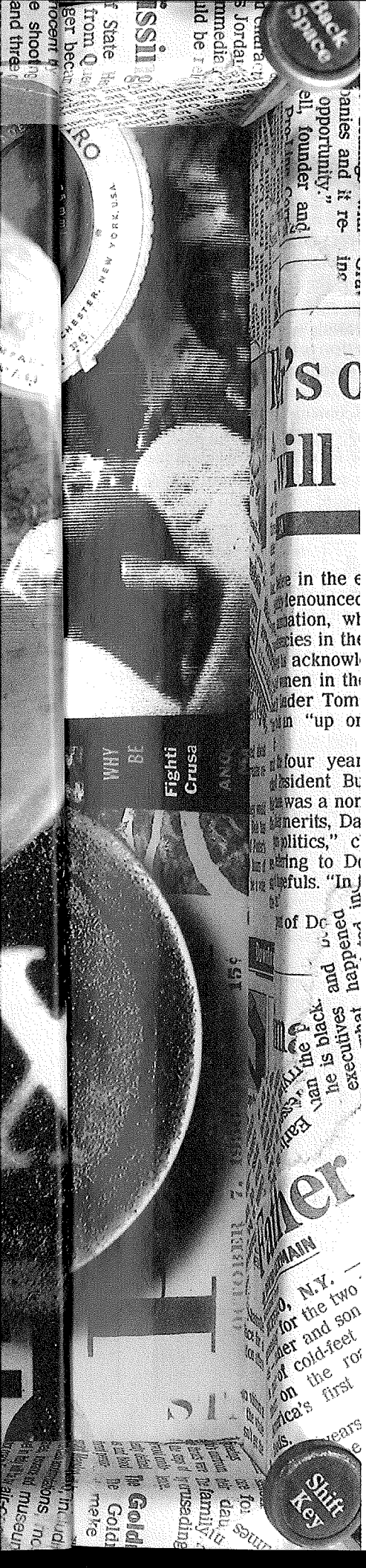
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The Word Electric

The Internet is the new publishing frontier, offering a wealth of opportunities from mailing lists to multimedia 'zines.

By Richard Wiggins

Today we hear visionaries, pundits, and politicians extol the virtual libraries of the future. For instance, Vice President Gore paints an image of a school girl in rural Tennessee reading a book from the Library of Congress using a home computer tapped into the National Information Infrastructure. Today's Internet already offers prototypes of this sort of vision.

In fact, given Internet access, that school girl could connect to the Library of Congress and search its catalog today. Some people would question the utility of this service because the student needs to read the actual book or journal article. Knowing it's in the library but not being able to fetch it is of little use.

As it happens, the Library of Congress, along with other leading research libraries, is working to put publications online. But before this can happen, significant organizational, technical, and legal issues must be resolved. Electronic publishing on the Internet covers a wide range of media and types of endeavors. Following is a brief survey.

INFORMAL PUBLISHING

The most common example of informal publishing is the Frequently Asked Questions (FAQ) file, which answers questions of interest for a particular audience, usually associated with a mailing list or Usenet newsgroup. A FAQ typically is maintained by one author with contributions from many others. Over time, FAQs can become weighty documents, full of useful information. The Usenet newsgroup **news.answers** serves as a repository for periodic reposting of FAQs on a wide range of topics.

NEWSPAPERS AND MAGAZINES

A large and expanding number of mainstream newspapers and magazines are establishing sites on the Internet,

PHOTOGRAPH BY MARK TUCKER

The utopian view is that information should be free. The reality is that authors and editors expect to be compensated for their work.

particularly the World-Wide Web (See "News Paperless," pg. 40 and "On the Cyber Racks," pg. 36). These sites vary greatly in scope and sophistication. An increasing number of ventures are trying to turn a profit online by instituting fee-based services.

SELF-PUBLISHED MAGAZINES

Also known as *'zines,* these publications may be ephemeral or may endure—depending on the motivation of the authors and editors. Like the weekly or monthly literary papers one finds in college towns and in big cities, many 'zines are oriented towards the offbeat (see " 'Zine Scene, " pg. 50).

ELECTRONIC JOURNALS

These publications differ from less formal electronic magazines just as scholarly journals differ from other periodicals. Articles tend to be written in a more formal style, editing is more rigorous, and articles often are evaluated by peer scholars before being selected for publication. The sponsors of electronic journals may be professional associations such as the American Physical Society (**http://aps.org**) or research libraries such as the University of Houston, sponsor of the pioneering *PACS Review* (**http://info.lib.uh.edu/pacsrev.html**).

PREPRINT ARCHIVES

These services do not attempt to replace print journals, rather they serve as a way scholars in a particular field can preview upcoming articles without waiting for the print journal. The pioneer in this area is the Los Alamos Physics Preprint Archive (**http://xxx.lanl.gov**).

COMMERCIAL REFERENCES

Vendors of print reference materials are beginning to deliver their works over the Internet. Because these vendors are profit-oriented, they charge fees for access to their information. *Encyclopedia Britannica* is a pioneer in this area, offering full access to its text and graphics via the World-Wide Web (**http://www.eb.com**), with access based on campus licensing arrangements.

Just as the range of documents published on the Internet runs the gamut from highly informal writing to scholarly materials, the range of technologies chosen for presenting this material varies widely. FAQ files tend to be found in newsgroups and in a few specialized archive sites. Pioneering e-journals first appeared on dedicated mailing lists, for the simple reason that editors could assume their readers had access to e-mail but not to other media such as anonymous FTP or Gopher. Increasingly, magazines and e-journals are appearing on the World-Wide Web, where the ability to merge text, graphics, video, and sound on a single page is a powerful lure, regardless of whether the readership has convenient access to the Web.

With new electronic publications springing up (and others fading) almost daily, the general reader begs for well-organized, complete archives. Readers, authors, and editors ideally would like to see:

- Easy access to journals, with multiple paths to each issue and article. This means the archive must provide browsing by title, subject, author, and via keyword searches.
- Full text and graphics for each article.
- Complete sets of back issues, and up-to-date collections of current issues. (One editor of a scholarly journal complained bitterly when he discovered an archive had only the first, experimental issue of his publication and none of the current issues.)
- Alert services through which readers can specify topic areas by keyword once, and the archive presents a list of articles that attempt to match the topic area, selected from a wide range of journals. There have been a few attempts to build such archives, but so far the projects have not received the funding or staffing levels required for such a Herculean task.

Navigation will remain a key issue within particular archives and across the entire Internet. Newer Web archives such as Carnegie-Mellon's Lycos service (**http://www.lycos.com**) offer great promise, but there is a need for standards initiatives such as the Uniform Resource Identifiers project to bear fruit before Internet catalogs approach the usefulness of today's library catalogs.

Today, the Internet serves mainly as a window into traditional print media. For instance, CARL (Colorado Association of Research Libraries, **http://www.carl.org**) offers a useful table of contents service. You subscribe to the table of contents of popular magazines once, and you receive them via e-mail as each new issue comes out. You then can submit a request for each article of interest via e-mail and the full article will be faxed to you.

Encyclopedia Britannica chose the Web as the way to offer full access to text and graphics of its complete encyclopedia. The company sees Britannica Online growing beyond an online edition into a complete knowledge base with frequent updates of articles and pointers to other live collections on the Web. For example, you might read about the Hubble telescope in an *Encyclopedia Britannica* article, then link to a NASA page offering recent news and images.

Of course, consumers will expect a knowledge base to be more than the existing *Britannica* articles plus a few live hyperlinks. They will want *Encyclopedia Britannica* to be an encyclopedia, almanac, and newspaper archive. For instance, in today's *Encyclopedia Britannica* online, you cannot obtain something as simple as a list of all the land-grant universities in the United States. The ideal knowledge base would allow a reader to find an answer to such a question without having to surf among many competing services.

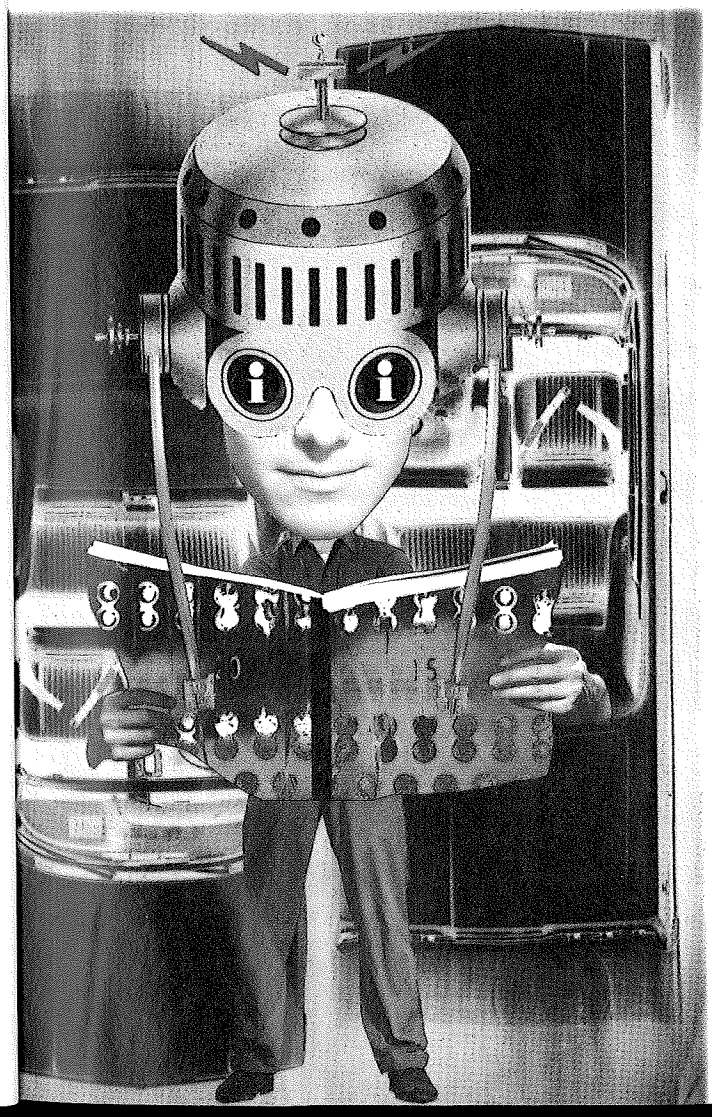
Commercialization is another key issue. The utopian view is that information should be free. The practical reality is that authors, editors, and publishers expect to be compensated for their work. In the early days of electronic journals, authors were willing to have their articles appear in freely available form for online distribution. In some cases, the motivation was glory (or tenure) instead of profit, but in the long run most authors want to be paid.

Encyclopedia Britannica has chosen

Illustration by Francisco Caceres

to begin with a campus-licensing model. Increasingly, we can expect Internet publishers to sell access to their documents and databases on demand as new transaction systems (electronic cash, and so on) enable consumers to pay for wares as they need them. With the deployment of commerce-ready clients and servers (such as Netscape's Netsite) one can imagine a student being able to surf to a waiting fee-based encyclopedia at three in the morning while finishing a term paper. Similarly, CARL could deliver complete articles on demand via the World-Wide Web instead of by fax.

Once compensation mechanisms are in place, the World-Wide Web will place great pressure on mass-market information utilities such as CompuServe. Just as they have been forced to offer interoperable e-mail, these utilities will have to offer access into their document archives without the reader first joining the service. Instead, a reader will fetch documents on a pay-as-you-go basis. For example, if someone wants a single transcript of *This Week with David Brinkley*, he or she will fetch it and pay via the Web, rather than joining America Online.



Some people see the Internet as a way for universities and scientists to avoid the rapacious subscription fees charged by publishers of scholarly journals. It is said that a university ends up paying twice for information—once to produce it and again to read about it in journals. At the same time, some publishing firms are working on ways to deliver their journals over the Internet—and of course, for a fee.

Many traditional publishers are exploring Internet delivery to the masses. Dow Jones, Hearst Corp., *The New York Times*, Time Warner, *USA Today*, and other ventures have launched a variety of fee-based services or pilot projects on the World-Wide Web (see "On the Cyber Racks," pg. 36 and "News Paperless," pg. 40).

Of course, some publishers are able to make their complete documents available for free. One example is the *Thomas Register*, a venerable listing of manufacturing firms. This reference document is freely available on the Web (**http://www.thomasregister.com**), with advertising paying the freight. According to Andra Beddia, Thomas's assistant manager for technology development, the company is trying to build a complement for the print product, not a replacement.

"Bringing buyers and sellers together is our job," she said. "We'll continue to print books as long as people want them." The online version can offer superior random searching while including advertising, just as do the print volumes.

Even if you could buy complete books online, you might not want to read them on a computer screen. Few people who have considered the matter believe online viewing will replace paper books anytime soon. Computer screens just cannot compete with the printed word for sequential reading. Today, the Internet is hostile to capturing text for offline printing and reading. (As an exercise, try to locate the HTML 3.0 specification and print it out.)

HTML and the Web are in many ways suited for online viewing and are inherently ill-suited for offline printing. With more and more ways to move from traditional formats such as Microsoft Word to and from HTML, there is hope that both needs can be satisfied. Portable document formats such as Adobe's Acrobat may step in to meet these needs as well (see "Adobe Casts Its PDF Net," pg. 70).

In the meantime, the Online Bookstore (**http://marketplace.com/obs/obshome.html**) is blazing a trail for previewing books over the Internet. You can read a chapter or two on its site, then decide if you want to purchase the whole book. If you do, you can place your order via the Net and receive the book via mail. Thus, the Internet can replace paper and help you obtain the traditional print materials you want.

How do you establish a presence on the Internet? Individuals are able to put up home pages on Internet service provider sites for small fees or for free. America Online and Prodigy have introduced home page services and CompuServe will soon follow. You also can connect your own PC, Mac, or Unix box to the Net and publish. Web server software is available for free (see pg. 68), and commercial packages (such as Quarterdeck's WebAuthor) start at about $130.

If your company wants to publish a brochure or catalog on the Net, the choices are many and varied. These days, organizations from CBS to Sony to Disney see the Web as the best Internet presence. (You know the Web is a big deal when the ads for David Letterman include a URL.) Your first temptation may be to buy a $25,000 Unix machine, along with a commercial Web-server software package. That sort of strategy may make sense if:

- Your company is large or you expect the documents to be immensely popular, with thousands of accesses per day.
- Your company has a permanent Internet connection of reasonably high speed.
- You have a staff with the expertise to maintain a server.
- You want to integrate your Web server

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into existing corporate databases (whether on mainframes or LANs).

Your organization may be better off not running its own server if:

- Demands are low.
- You don't have a permanent Internet connection.
- You don't have a large technical staff for server administration.
- You don't need to plug into existing databases.

If you are a small company whose only link to the Internet is a 14.4-Kbps modem, you are better off renting space on someone else's server. Many Internet service providers and computer vendors are getting into the Web-presence provider business. If your focus is retail sales, you might want to pay the rent associated with highly visible Internet shopping malls. Prices vary widely, so shop around.

You also must decide whether to prepare your own HTML documents or outsource the task. This is analogous to providing camera-ready copy for a print shop or hiring a desktop publishing specialist to do it for you.

If you choose to run your own server, there are a wide range of options for hardware—from high-end Unix workstations to Pentium PCs. You should consider your transaction load and plans for growth in picking your hardware.

You also can buy one of the many new commercial Web server packages that have been introduced (see "HTML Helpers," pg. 62). Vendors such as Apple, Folio, IBM, Information Dimensions, Netscape, O'Reilly & Associates, Quarterdeck, and Silicon Graphics offer a spectrum of hardware and software packages for serving data on the Net.

Whether you publish on your own server or rent space elsewhere, you will face choices in home page design, adding multimedia elements, and organizing the collection in a way that's useful to a broad audience. Be sure to surf the Net to find good examples of document collections worth emulating. There also is ongoing site enhancement and maintenance to perform, which is no small chore. ■

Richard W. Wiggins (rwwmaint@msu.edu) is the author of The Internet for Everyone: A Guide for Users and Providers *(McGraw-Hill).*

CIRCLE NUMBER 101

THE INTERNET

You've already heard about it. In fact, you've already decided your company needs to be connected. Either to take advantage of the vast amount of information the net offers, or to stake out a piece of cyberspace for yourself by creating your own Web site. The problem is, with so many companies out there calling themselves Internet service providers, who do you choose? A phone company? A computer company? A software company? A cable TV company? How about an Internet company? PSI*NET*®.

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AND YOU

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CIRCLE NUMBER 59


The Detroit
Sunday, June 25, 1995
Michiganians fi
SPIN
Deal
Breeder's Leader
Gets Pissed
by Charles Aaron
ELASTICA
Absolutely Fabulous
TO HELL AND BACK
People weekly
BEFORE THEY WERE STARS
A look at the famous before they were buffed and polished for prime time. (Geek or glam? You
TIME Universe
Fun



On the Cyber Racks

The Web offers magazines a new medium in which to recreate themselves.

By Paul Ferguson

In some ways, the Internet seems a strange place to publish a magazine. Academic journals brush shoulders with punk-rock magazines, and professional writers compete with part-time publishers who have little to say.

The Internet is perhaps the most democratic medium in history. Serious publishers, even corporate ones, carry no more weight on the World-Wide Web than bored college students who publish on the Web in their spare time. In fact, small-time publishers often stand a better chance of getting noticed. And because the rules of HTML (Hypertext Markup Language) apply equally to everyone, the Web pages of publishing giants often look no better than those of Web beginners, no matter how much money is thrown at them.

If Web publishers have learned anything, it's that the Net is big enough for everyone. The worldwide distribution system of the Internet, low publishing costs, multimedia capabilities, and the growing popularity of the World-Wide Web have created a stampede of publications, from established behemoths of the print world to upstart online magazines that are changing the definition of the word. Whether or not the Internet will replace print, there is no question that it is quickly becoming the medium of choice for magazine publishers with an eye toward the future.

One person who knows life on both sides of the publishing fence is Michael Goldberg. A veteran rock critic with a decade of experience as an editor and writer at *Rolling Stone*, Goldberg is well-acquainted with the joys and pains of putting together a major print publication. Over time, Goldberg came to see the limits of print and television, the two most prominent media. He realized the Internet was the only viable medium for his vision of an interactive rock-and-roll magazine, and the power and popularity of World-Wide Web made it the ideal vehicle. The result was *Addicted to Noise*

PHOTOGRAPH BY MARK TUCKER

ATN features some of the most prominent rock critics, including writers from *Billboard*, *Creem*, *Rolling Stone*, and *The New York Times*.

(**http://www.addict.com/ATN**), which came to life last December.

"The reason for *Addicted to Noise* on the Internet is that the Net right now is the best communications medium available to disseminate integrated images, text, sound, and video to a worldwide audience," Goldberg said. "It's instantaneous. For us to be able to put up our daily news column and have simultaneously people in Australia, in Japan, in Spain, in Portugal, anywhere you can think of, getting that information at the same moment, is very powerful."

Addicted to Noise combines the timeliness of a newspaper or TV program (its daily news section reports music news sooner than any other organization in the world) with the kind of in-depth music coverage one would expect from a print magazine. You don't have to take the critics' word about the music, either. You can download one of several song samples that accompany the album reviews and judge for yourself.

Interviews with members of bands such as R.E.M. and Primus include not only insightful commentary, but downloadable QuickTime movies of parts of the interviews themselves. Once you've read the latest issue, you can travel over to the "Sonic Lodge" and tell fellow readers and *ATN*'s editors what you think. And if you miss an issue, you can always read it later, as all of the back issues are available online.

This monthly Web magazine is competing with print magazines with more than just its unique structure. *ATN* features some of the most prominent rock critics in the world, including current and former writers and editors from *Billboard*, *Creem*, *Rolling Stone*, and *The New York Times*. *ATN* also is affiliated with the Internet Underground Music Archive (**http://www.iuma.com**), which houses several other music publications, making it part of one of the most important music-oriented information sources on the Web.

Considering the hip image of the Internet being propagated among the younger set, it's not surprising that many Web magazines cater to young adults. Among these rebellious e-publications are *Word* (**http://www.word.com**), *Hip* (**http://www.hip.com**) and *Buzznet* (**http://www.hooked.net/buzznet**), all of which cover largely the same ground: pop culture, the Internet, music, and other issues of prime interest to twenty-somethings.

Word, led by former *Vibe* editor-in-chief Jonathan Van Meter, promises a wider range of material and a more serious, respectable demeanor than most Web offerings aimed at young adults. *Buzznet* takes a more creative approach, with stories that run the gamut from a knife-throwing tutorial to a harrowing journey through "O.J. City," while *Hip* is a somewhat unpredictable mixture of reporting, fiction, and creative speculation. As with print magazines that court young adults, the quality of such efforts tends to vary wildly, but they also offer fresh viewpoints that haven't been put through a corporate filter (see " 'Zine Scene," pg. 50).

The publishers of *Mother Jones*, which caters primarily to baby boomers, were also looking to attract a younger audience when they started an online version of their news magazine (**http://www.mojones.com**). In addition to articles from the print version, *Mother Jones* Interactive offers Web features such as interactive kiosks with information about nonprofit organizations, numerous topical chat rooms, and an extensive library of back issues.

African-Americans are getting a voice on the Internet with the arrival of *ONE* (**http://www.clark.net/pub/conquest/one/home.html**), a Washington, D.C.-based publication that recently left behind the print world to publish exclusively online. The primary reason for the move was financial, but publisher Eric Easter sees a unique opportunity to get African-Americans involved in the Internet. "As an Internet publication, our mission is to create a compelling reason for African-Americans to embrace technology by offering content that is culturally significant to them as well as others—and only on the Internet," Easter said. With a smart, original approach to politics, music, and culture aimed at young adults, *ONE* fills a gap in online publishing that may encourage more culturally diverse discourse on the Internet.

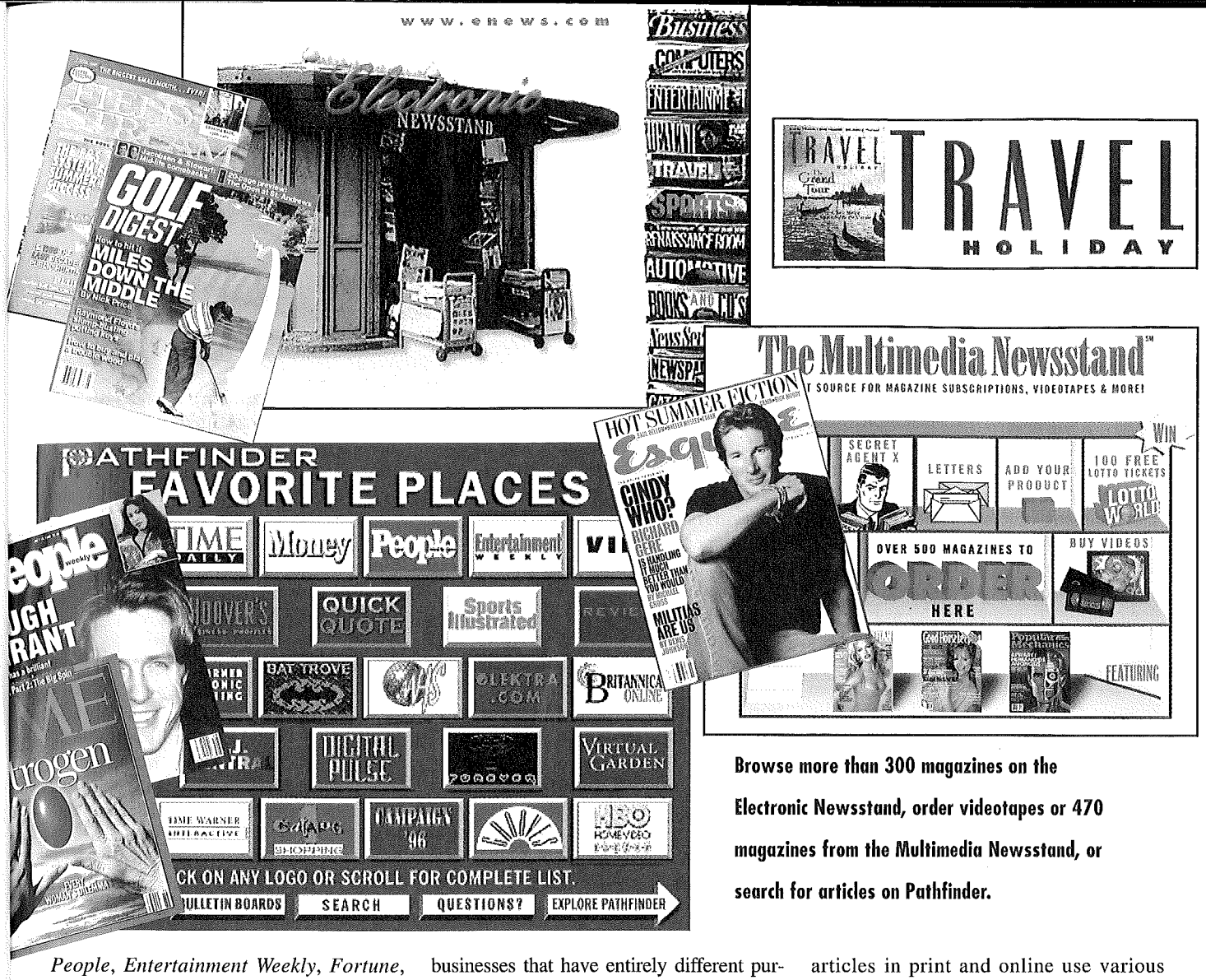
Web publications, like their print counterparts, tend to congregate in electronic sites. The newsstand has proven an effective, efficient means of selling print magazines, and many Web publishers are finding that a similar arrangement works just as well online. For starters, Web magazines on just about every conceivable subject can be reached through Yahoo (**http://www.yahoo.com/Entertainment/Magazines**), the popular Web hotlist site. The Global Network Navigator service (**http://www.gnn.com**) also maintains a healthy list of Web magazine links, while Tables of Contents (**http://www.magbrowse.com**) lists—what else?—the latest tables of contents of 210 popular magazines, along with images of their covers.

A Web site that takes the newsstand metaphor seriously is the Electronic Newsstand (**http://www.enews.com**), a service that offers limited online versions of many print magazines beneath an interface that evokes the experience of browsing the racks of the corner newsstand. The Electronic Newsstand boasts an impressive array of magazines, including online counterparts of such diverse titles as *The Economist*, *Field & Stream*, *10 Percent*, *Bass Player*, and *Arthritis Today*.

As the ultimate purpose of the service is to sell subscriptions to print magazines, readers looking for full-fledged Web versions of their favorite magazines won't find them here, but the Electronic Newsstand does form an important link between the print world and the Internet.

Rather than let a third party handle the online versions of their print magazines, numerous corporate publishers have started services specifically for their publications. Time Warner's Pathfinder (**http://www.pathfinder.com**), CMP's TechWeb (**http://techweb.cmp.com/techweb**), Hearst Corp.'s Multimedia Newsstand (**http://mmnewsstand.com**), Mecklermedia's iWorld (**http://www.mecklerweb.com**), and Ziff-Davis Publishing's ZD Net (**http://www.ziff.com**) are all beautifully designed Web resources based on a bevy of popular print magazines.

Pathfinder, probably the most ambitious of the corporate Web services, combines the talent and respectability of *Time*,



Browse more than 300 magazines on the Electronic Newsstand, order videotapes or 470 magazines from the Multimedia Newsstand, or search for articles on Pathfinder.

People, *Entertainment Weekly*, *Fortune*, and other Time Warner magazines with a host of interactive features.

Not surprisingly, many of the corporate publishers currently hawking their articles on the Web publish computer magazines—more than 30 of them, from consumer publications such as *Internet World*, *MacUser*, and *Windows*, to industry weeklies such as *Computer Reseller Week*, *Interactive Week*, and *WebWeek* can be found at TechWeb, ZD Net and iWorld, respectively. You'll only get a taste of them on the Web, but if you visit them all, you'll end up with about one complete computer magazine. Not bad for free.

A number of important issues face publishers of Web magazines, not the least of which is funding. Since publishing on the Web requires the online equivalent of a printing press—a server with a high-bandwidth connection—not many Web magazines truly stand on their own. A number of Web magazines, including *Buzznet*, *Hip* and *Word*, are offshoots of businesses that have entirely different purposes, including service providers and Web advertising agencies. Many of those remain self-sufficient by accepting advertising.

Jeffery L. Dearth, CEO of the Electronic Newsstand and president of *The New Republic*, sees the immediate future of most Web magazines as a method of offering print subscribers something more for their money, while putting enough free content on the Web to attract new subscribers. The future of magazines that exist exclusively on the Web, like that of their print cousins, will depend primarily on their quality. "They're going to be as viable as their editor is excellent. Create a product that I love to read, get me to really want it, write it beautifully, and give me something that captures an audience, and sure, it will work," he said. "The idea that somehow you can throw up a bunch of schlock because you're leveraging the Internet to get to a lot of people is nonsense."

Making ends meet is not the only concern, particularly for publishers working with traditional print and electronic media. Publishers that use the same articles in print and online use various strategies to avoid competing with their own magazines: many include only a few of the articles from their print versions online, some put the articles online weeks or months later, and some do both.

Moreover, magazine publishers are discovering that online publishing offers benefits that print will never be able to match. As a two-way medium, the Internet makes reader feedback possible on a grand scale, allowing readers to talk directly to writers and help shape the direction of a publication.

What we are seeing today are merely experiments in Web magazine publishing. The real thing is still somewhere down the road. The publishers that are creating Web magazines may well become the ones who chart the course of publishing in the next millennium. ■

Paul Ferguson (paul-ferguson@uiowa.edu) lives in Iowa City and publishes Whirligig *(http://greed.isca.uiowa.edu/users/paul-ferguson), a music and culture magazine.*

News Paper

The Internet is changing the way news is packaged and delivered

By

It is a natural progression for newspapers to move onto the Net, where millions of potential readers await. However, as traditional newspaper publishers are learning, the fabric of a newspaper changes on the World-Wide Web, where hot links, discussion forums, sounds, movies, and other features add new dimensions to news delivery. Moreover, new types of custom news delivery services are emerging.

Until recently, the only ways to receive news was through the morning newspaper, news broadcasts on the radio and TV, or through the grapevine. Today, the Internet is assuming an increasingly larger role in the dissemination of international, national, local, and specialized news.

Unlike print, radio, and TV media, news on the Internet can be updated frequently and read any time of day. Besides covering sports and other special events, sites have sprung up in response to disasters like the earthquake in Kobe, Japan, and the Oklahoma City bombing. These sites provide up-to-the-minute reporting, and some of them have remained online to provide ongoing coverage and to serve as archives.

Print newspapers are going online in a veritable stampede to avoid being left behind by the new technology. In addition, a host of personalized news services has arisen that allow subscribers to receive information tailored to their interests. These services typically are unconnected to conventional news delivery ventures and provide low-cost general news or higher-cost news customized each client.

Envisioning a future enhanced by online technology, Cathleen Black, president and CEO of the Newspaper Association of America, said, "I can easily imagine flipping on my computer and looking at something that looks like a newspaper but is interactive, where I can get more information about a particular subject if I want, where I can place orders, and where I can send news and opinion back to the newspaper and to other readers."

Many mainstream news organizations are reading the writing on the wall and preparing for a digital world. "We have to be able to deliver news, information, entertainment, and advertising in a way that customers want to receive it," Black said.

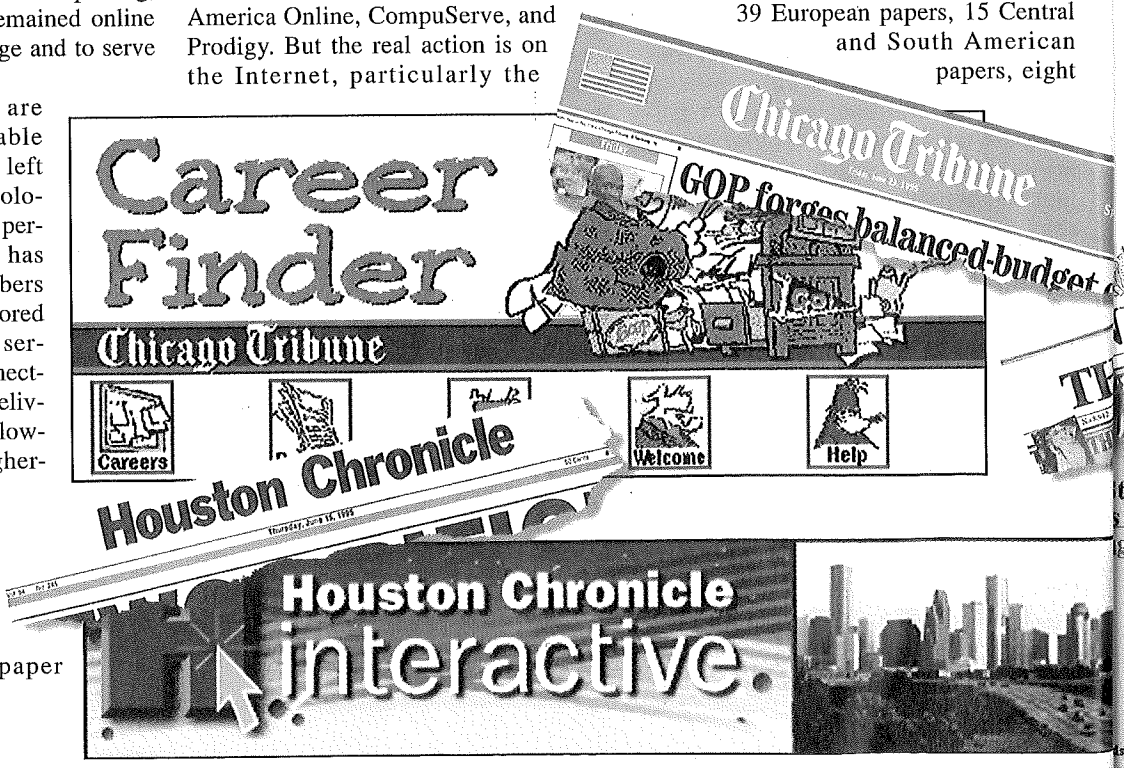
According to surveys by the Kelsey Group, 3,200 American newspapers now offer interactive services, up from 2,700 in 1994; 2,000 in 1993; and 42 in 1989, the first year Kelsey conducted its survey. The services include online news as well as fax and audio delivery.

Some newspapers are using bulletin-board-systems (BBS) front ends, allowing readers to connect directly to their sites. Others are hopping on national online services, such as America Online, CompuServe, and Prodigy. But the real action is on the Internet, particularly the World-Wide Web, which allows publications to incorporate images and sound. The Internet also gives news vendors more control over their content and a larger percentage of revenues than do commercial services.

There are a number of places you can go on the Internet to peruse the online offerings of various newspapers around the country (see "News on the Net," p. 42). The best starting point is a Web site called Commercial Online Newspaper Services at **http://marketplace.com/epapers.list.www/e-papers.home.page.html**.

This well-designed site includes information about nearly 200 online newspaper services in operation or under development worldwide. The site offers information about newspapers delivered through local dial-up services (BBSs), commercial online services, and the Internet. It was created by Steve Outing, an online newspaper consultant and author of the *1995 Online Newspaper Report* from Jupiter Communications.

At press time, the site had listings for 73 daily U.S. newspapers on the Net, 36 weekly U.S. papers, 10 Canadian papers, 39 European papers, 15 Central and South American papers, eight



rless

By Reid Goldsborough

Asian papers, three Australian papers, and two African papers. Most of the listings include live links. The site also includes a list of consultants, organizations, and newsletters that specialize in online news as well as related conferences, workshops, and job openings.

Some Net newspapers provide broad daily or weekly news reporting and a variety of feature sections, while others offer limited news options. Still others sponsor resources like weather or job sites. *The New York Times* offers an eight-page selection of news and features highlights called TimesFax Internet Edition, which is available only in Adobe Acrobat format and requires a special viewer (see "HTML Helpers," pg. 62).

The Wall Street Journal is available only as part of a larger searchable database on DowVision, a news service being tested by Dow Jones and WAIS Inc. You can browse categories or search by source, subject, or keyword.

One of the best newspapers on the Net is Mercury Center Web (**http://www.sjmercury.com**), an offshoot of the *San Jose Mercury News* in Silicon Valley. The initial online edition appeared on America Online in May 1993, and it is still available on AOL. In January, the Internet edition made its first public appearance. In many ways the Mercury Center is blazing trails by providing a combination of free and subscription-only services and subsidizing editorial with advertising geared specifically for the Internet.

The Internet edition started out entirely free, but in April the Mercury Center began limiting certain offerings to paid subscribers. You can still read without charge the day's headlines, article summaries, a featured home page story, searchable classified ads, and other advertising however.

It now costs $4.95 per month, or $1 extra per month if you already subscribe to the printed paper, to receive the full text of the day's news stories (new stories are added throughout the day), wire service articles, comics, the paper's Dave Barry archive, and other features.

USA Today gives you a small taste of news for free, then asks you to subscribe to the USA Today online edition for $12.95 a month for three hours and $2.50 for each additional hour. A Windows 486 PC is required, plus a custom Web browser.

Most other newspapers that have a presence on the Internet are still entirely free, although a number of them have announced plans to charge for at least part of their offerings. The subscription fees that the Mercury Center charges are reasonable when you consider the cost of a subscription to a printed newspaper and all the extra features available online. The advertising revenue raised through online ads helps keep costs down.

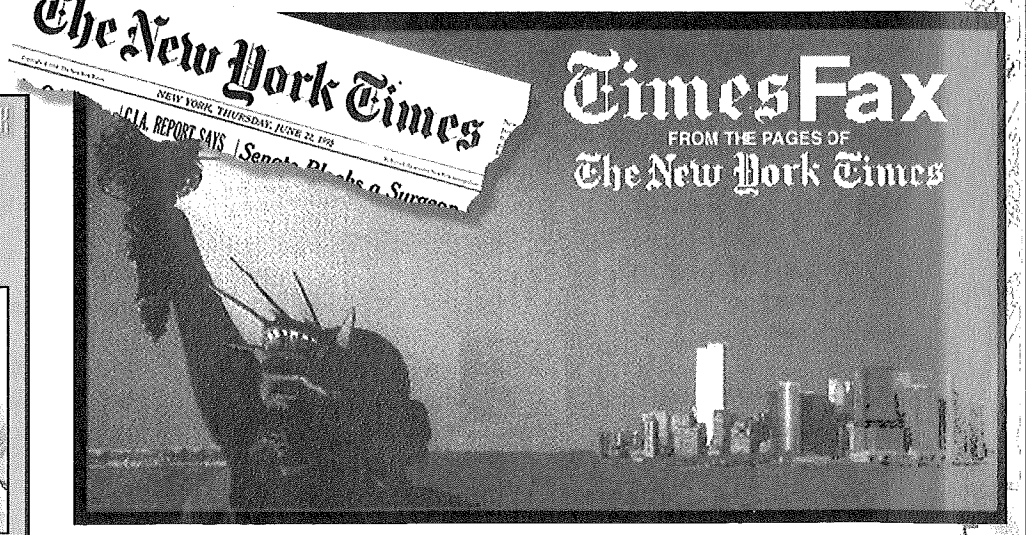
Unlike ads on Prodigy, which occupy part of most screens, the ads on the Mercury Center are not intrusive. At the bottom of most news pages you'll find the logo of an advertiser, a descriptive line, plus a link to more information. You usually have to scroll down several screens before you see any advertising information. The paper charges advertisers $100 per day for one of these spots, and advertisers include Del Monte, House of Charm, and IBM.

"The big money in Internet publishing will come from selling sponsorships—

The number of daily and weekly newspapers online is growing exponentially worldwide, and some sponsor special features such as the *Chicago Tribune*'s Career Finder.







"I'll be so happy when information is so easily available as to make journalists obsolete," says one participant in an online discussion.

hyperlinked advertisements stripped across the top and bottom of pages on the World-Wide Web," said Rosalind Resnick, editor and publisher of *Interactive Publishing Alert* (see "Newsletters at Crossroads," pg. 52).

One area in which the Mercury Center Web site is not blazing trails is interactivity. There's no way to engage in conversation with reporters, editors, or other readers—which is a key differentiator between the online world and traditional publishing. While the *Mercury News* has announced plans to create newsgroup discussion areas, other online papers already have done so.

The Gate (**http://sfgate.com**) is an Internet-based offering from two other West Coast newspapers, the *San Francisco Chronicle* and *San Francisco Examiner*. Unlike the Mercury Center Web, *The Gate* is high on interactivity (although it's currently low on news content). The first option on *The Gate*'s home page, in fact, is a conference area with 11 discussion forums called Commons, Media, Sports, Food, Internet, Music, Film, Business, Health, Public Affairs, and Home Scene.

One of the toughest challenges of any online forum is to strike a balance between open discussion and an anything-goes atmosphere. Flame wars that frequently take place in Usenet newsgroups can give an online newspaper a bad name and discourage readers and reporters from participating. On the other hand, newspapers historically have been among the fiercest defenders of First Amendment rights. If an online newspaper was too heavy-handed in trying to silence people who voice strong emotions, it would only appear hypocritical.

The Gate has adopted various tactics to discourage vitriol in its discussion conferences. You must register before being able to participate in a discussion. You're asked to use your real name, not a handle, and you must provide your e-mail address. After you register, *The Gate* sends you a welcoming message via e-mail, and if the mail bounces, it cancels your account. Obviously these measures do not guarantee that people will be who they say they are, but they help fashion an online atmosphere where people take responsibility for their messages. The system operators don't pre-screen messages, but they reserve the right to remove comments and cancel accounts.

Reading an online version of a conventional newspaper isn't the only way to get news via the Internet. You also can receive news articles created specifically for online readers from services that have no counterpart in traditional paper-based publishing.

The most popular Internet news service of this type is ClariNet, a San Jose, Calif.-based service from ClariNet Communications Corp. (**http://www.clari.net**). It's available through some Internet service providers, BBSs, corporations, and universities.

On a daily basis, ClariNet distributes news articles from the Associated Press, Reuters, and Newsbytes, a computer industry news service. You can also read syndicated features such as Miss Manners, stock market reports about technology and telecommunications companies, and cartoons.

News articles usually are delivered via newsgroups (this is one of the few incidences in which the term "newsgroup" is genuinely descriptive). The scope of the material can be mind-boggling. Some local Internet

News on the Net

LINE NEWSPAPER SERVICES SOURCE DIRECTORY
http://www.mediainfo.com/edpub

NewsLink
http://www.newslink.org/newslink

Commercial News Serviceson the Internet
http://www.jou.ufl.edu/commres/webjou.htm

Journal of Electronic Publishing
http://www.press.umich.edu/jep

SOME NOTABLE NET NEWSPAPERS

Mercury Center Web (*San Jose Mercury News*)
http://www.sjmercury.com

The Gate (*San Francisco Chronicle and Examiner*)
http://sfgate.com

Career Finder (Chicago Tribune)
http://www.chicago.tribune.com

Nando Times (Raleigh News & Observer)
http://www.nando.net/newsroom/nt/nando.html

CUSTOM NEWS

ClariNet
http://www.clari.net

CRAYON (CReAte Your Own Newspaper)
http://www.eg.bucknell.edu/~boulter/crayon

internetMCI NewsPage
http://www2.pcy.mci.net/whats-new/news/index.html

PERSONALIZED NEWS

First/HeadsUp (800) 766-4224

Newscast (800) 299-2278

Personal Journal/ Wall Street Journal (800) 203-0706

San Jose Mercury Center's NewsHound (800) 818-6397

DowVision
http://dowvision.wais.net

Ensemble Information Systems
http://www.ensemble.com

Farcast
info@farcast.com

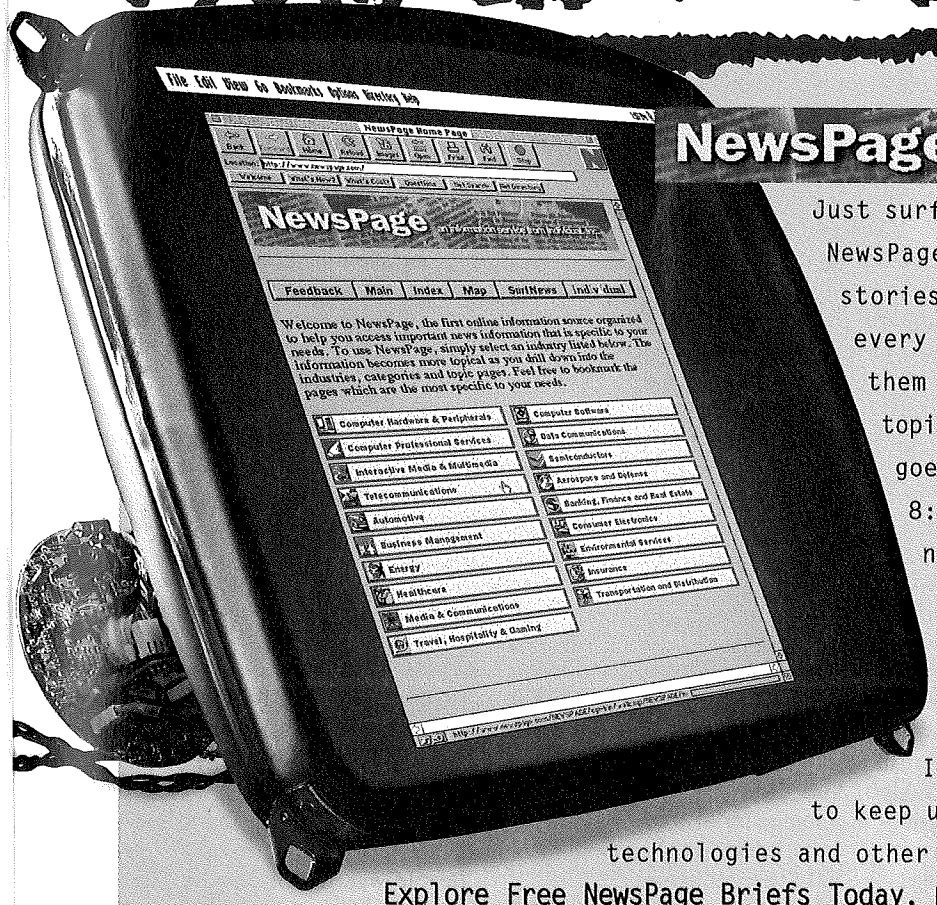
Global Internet News Agency
http://www.gina.com/gina

InfoSeek
http://www.infoseek.com

Individual
http://www.newspage.com

Stanford NetNews Filtering Service
http://woodstock.stanford.edu:2000

are you still getting your news from dead trees?



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individual
SPREADING THE POWER OF KNOWLEDGE

CIRCLE NUMBER 63

The print and broadcast media do provide a valuable function in helping us distinguish news from gossip and fact from fiction.

service providers receive more than 300 different ClariNet newsgroups, each on a different subject. You can read about the aerospace industry, the environment, medicine, nuclear waste, personal finance, drama, book publishing, tax law, animals, microprocessors, and—yes—the Internet. There is even local news for more than 60 different areas around the country.

ClariNet charges service providers site licenses for its news feeds. As long as you're connected to the Internet through a subscribing site, accessing one or all of the ClariNet newsgroups are free. Licensing packages range from $.40 per user per month for a basic edition for Internet service providers and BBSs, to $3 per user per month for corporations. Educational pricing also is available. If you're not connected through a subscribing site, you can subscribe as an individual, although this costs $40 per month. You also can read ClariNet news stories at its Web site (**http://www.clari.net**).

A new means of accessing news on the Internet is CRAYON, an acronym for CReAte Your Own Newspaper (**http://www.eg.bucknell.edu/~boulter/crayon**). CRAYON lets you create a "newspaper" consisting of links to any of more than 100 news sources on the Internet. These links let you access national and international news, weather, business news, technology news, entertainment news, sports, comics, tabloid news, and news about the Internet.

With CRAYON you cannot preselect the types of subject matter you're interested in reading, as you can with clipping services available through CompuServe and GEnie. And it doesn't create a layout of a newspaper on your computer screen filled with articles pulled from the news wires available through Prodigy or CompuServe, as does PED Software's Journalist.

You begin by selecting one or more links to Internet sources of news. CRAYON fetches the news from these sources and displays it on your screen. You then save the links you selected to your own hard drive as a single bookmark in your Web browser bookmark file, so you can access the sources later without having to go through CRAYON.

CRAYON was created by Jeff Boulter and Dave Maher, two students at Bucknell University. In the spirit of the Internet, using CRAYON is absolutely free. Boulter says he and Maher are "trying very hard to keep companies from trying to snatch CRAYON up and charge people for using it." He does say, however, that he's considering licensing to others the software they developed to run CRAYON.

If you want more comprehensive, individualized news, there are a number of options out there. The hard reality, though, is that the more personalized the news, the more it will cost you.

A news service from Individual Inc. called First can provide you highly specialized news each morning via Internet e-mail. You select the subjects in which you're interested—say petrochemicals or radiology—and any companies or people you'd like to track.

Each evening, Individual's expert-system retrieval engine searches through the 15,000 news stories it has received that day for the subjects you've specified. Individual uses 500 separate information providers, from the Associated Press to industry-specific newsletters. You receive the full text of the news stories chosen for your profile.

Besides Internet e-mail, delivery options include Lotus Notes, fax, and other e-mail systems. Prepare for sticker shock, though. Aimed at corporations, First is priced at a minimum of $5,000 a year for up to 10 users, which equals a more manageable $500 a year per person.

Individual has another service, aimed at individuals, that starts at $29.95 a month. Called HeadsUp, it provides you with up to 20 news briefs each day on subjects you've specified. The briefs are summaries—one or two sentences long—of longer articles. If you want more information, you can read the entire article at a cost of $4.95 per article.

Do Usenet newsgroups and mailing lists deliver news? Most newsgroups and lists are chatty discussion forums rather than sources of hard news. In moderated newsgroups and lists a designated individual reads each message before it gets "published," filtering out much of the irrelevancy.

Still, there are some people who prefer information unfiltered, either by moderators or by the larger media. "I'll be so happy when information is so easily available as to make journalists obsolete," says one participant in an online discussion.

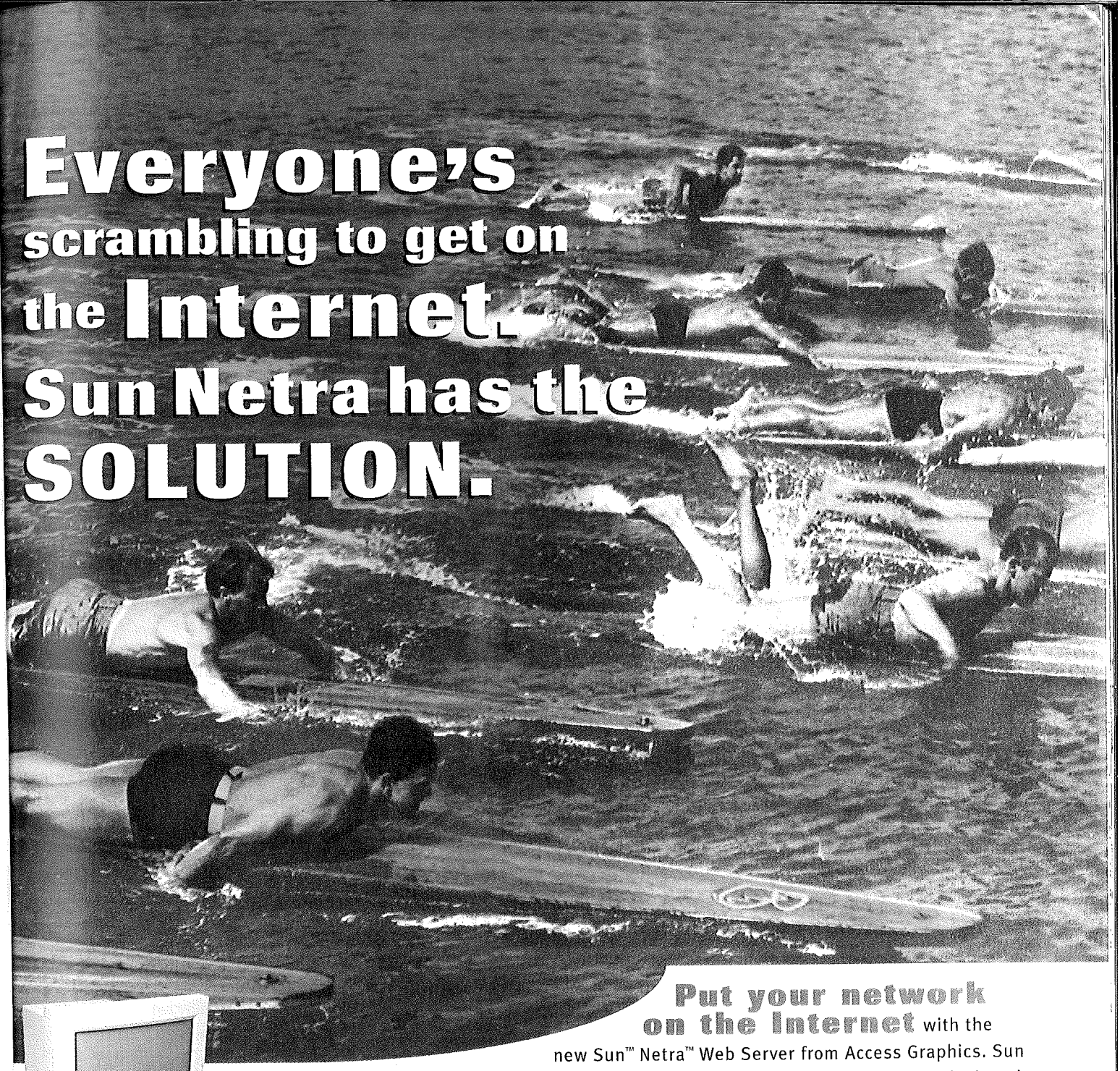
A number of Internet users believe the mainstream media regards the Internet as competition and fears it. They contend that the media sensationalizes Net pornography, child molesters, and stalkers to persuade the government to clamp down on the Net. "Do journalists, perhaps on an unconscious level, recognize the Internet and information connectivity as their natural enemy?" asks another online commentator in the same discussion.

Yet the print and broadcast media do provide a valuable function in helping us distinguish news from gossip and fact from fiction. "What distinguishes journalism from urban folklore, rumor, and gossip is a degree of professionalism about how to find information, how to recognize when a story hasn't been told but needs to be told, and some rigor about distinguishing fact from fiction," says an online journalist.

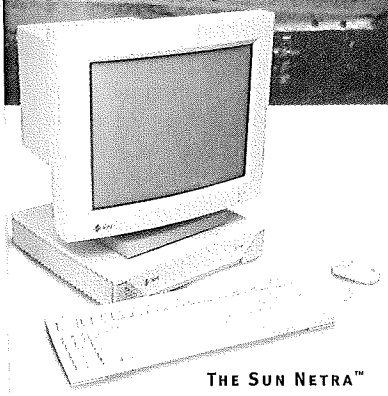
He continues, "If you browse around the Internet for long, you are reminded that people believe the most absurd things, that they are gullible and suspicious and predisposed to all sorts of fuzzy reasoning, and that it's hard to trust what many of them will swear is the truth."

Despite the tendency to sensationalize, the media also make news interesting. "People want information professionally picked, processed, and interpreted," says media scholar Leo Bogart in an article in *Media Studies Journal* (month, year). "They want this done with an understanding of the human dramas that mere facts disguise and distort. They want it done with literary style, through the use of language that evokes imagery and emotions. That is the job of journalism." ■

Reid Goldsborough (reidgold@netaxs.com) is the computer columnist for the Philadelphia Inquirer and the author of Straight Talk about the Information Superhighway *(MacMillan).*



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CIRCLE NUMBER 33

Renegade Band

The American Reporter is an upstart Internet newspaper formed by a group of disillusioned journalists.

By Ryan J. Donmoyer

As local and national news organizations scramble to reproduce and market their products on the Internet, a Net-born daily newspaper with meager resources, a shoe-string budget, and no established publishing tradition is scooping them all.

Using e-mail and other Internet utilities, reporters and editors from around the world have created an electronic newsroom where original stories are written, edited, and published electronically. The newsroom may be virtual, but the product is very real. Every day, a 35,000-byte edition of *The American Reporter* is distributed by e-mail to several hundred subscribers and placed on the World-Wide Web (**http://www.newshare.com/Reporter/today.html**). And while no one is making any money yet, its creators are confident that it is only a matter of time before daily and weekly newspapers begin buying the stories to supplement their existing wire coverage.

"We're small, fragile and hanging on by a prayer," said Hollywood, Calif.-based editor-in-chief Joe Shea, a veteran journalist who has written for the *Village Voice*, was an editor at *L.A. Weekly* magazine, and now covers the O.J. Simpson trial and earthquakes for the *New York Post*. "But I'm not worried about our survival."

While electronic publications pop up frequently on the Net, *The American Reporter* is unique in many ways. "In terms of a newspaper with original content, *The American Reporter* may be the first," said Adam Gaffin, author of *The Big Dummy's Guide to the Internet* and online editor for *Network World*, a weekly trade publication in Framingham, Mass. Gaffin reserves the distinction of first Net newspaper for Clarinet, which sells days-old wire copy to various networks and can be found on many systems' Usenet list.

But *The American Reporter* has something else going for it that separates it from most other 'zines: professionalism. "It's different from 'zines in that it has professional reporters and editors working on it," Gaffin said. "Presumably, this means they'll not only be objective, they'll be better able to dig up actual news and, just as important, stick with a story until the conclusion."

The first quarter of 1995 was not a good one for American newspapers. Daily papers in Houston and Milwaukee became casualties of the sky-rocketing cost of news print and folded within three weeks of each other. The editor and managing editor of the Pulitzer Prize-winning *Des Moines Register* quit, citing stress and burn-out, although insiders said privately that they left because cost-cutting measures were beginning to affect the paper's news content. Everywhere, newspapers were bracing themselves for rising costs by raising prices, increasing advertising percentages and trimming staffs.

These developments and others quickly became fodder for the members of SPJ-L, an Internet discussion list owned by Jack Lail and affiliated with the Society of Professional Journalists. Thread after thread emerged in which the reporters, editors and other journalism professionals who subscribe to the list lamented not only the passing of two fine newspapers, but also the growing uncertainty of the industry's future, an uncertainty that, ironically, is caused partially by the growing popularity of the Internet.

It was during one particular thread entitled "Goodbye *Milwaukee Journal*," however, that the call to arms came: If the members of SPJ-L were so disgusted with the way things were going, it was suggested, why didn't they start their own paper? While many such rhetorical suggestions suffer an apathetic or inflamed death on the Net, this one sparked some real interest, and almost as quickly as it was said, *The American Reporter* was born. It had a loosely affiliated, volunteer staff of about 30 editors and correspondents from around the world, a subscriber base numbering barely in the hundreds, and about $63 in the bank.

"I wanted to do it. Other people wanted to talk about it," said Shea. The first edition "went to press" April 10. While some would expect a fledgling publication to take a few months to find its legs, it wasn't long before *The American Reporter* had the opportunity to prove its mettle.

Despite being a bad time for American newspapers, the first quarter of 1995 delivered one of the biggest stories in recent history: the bombing of the Alfred P. Murrah federal building in Oklahoma City. When the national press corps descended on the city on April 19 to cover the drama, *The American Reporter* was right there in the trenches.

By a stroke of luck, one of the members of SPJ-L is Bill Johnson, a newsman who spent 42 years with the Associated Press, including 20 years in the Oklahoma City bureau. Johnson, who retired in February to raise his 9-year-old grandson, had already written a pair of articles for *The American Reporter* during its first week of publication including an account of a shoot-out at the Frank Keating mansion and one about political pressure to have V-J Day renamed "Victory in the Pacific Day."

When the news broke that there had been an explosion at the federal building, Johnson didn't wait for a call from Shea to begin calling his contacts. "I just started right there," he said. By the end of the day, he had pieced together a story based on dozens of telephone calls, televised press conferences, and a handful of exclusive interviews.

Yet, Johnson wasn't performing the same function for *The American Reporter* that he had served for the Associated Press. There was no way Johnson could



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report up-to-the-minute developments, nor was there any need to do so. "I don't think *The American Reporter* is in competition (with the mainstream media). I think it's an alternative news source for some people," he said.

So Johnson looked for angles that might have been overlooked by the mainstream media. In the weeks after the bombing, he scored interviews with the head of the day care center that had been in the building and with a University of Oklahoma scientist whose seismograph showed that there had been two explosions. Meanwhile in Washington, D.C., another freelance writer covered terrorism hearings on Capitol Hill. As Gaffin predicted, *The American Reporter* stuck with the story.

The hardest part of covering the bombing, Johnson said, was identifying himself as a reporter for *The American Reporter*, with which no one was familiar. "People thought it was some kind of tabloid," he laughed. But when he explained that it was a newspaper produced and distributed on the Internet, people understood quickly. "I haven't talked to anyone who didn't know what the Internet is," he said.

Shea is pleased with *The American Reporter*'s Oklahoma City coverage, but he also said the publication wasn't out to compete with the established media. Instead, it wants to supplement it. "We don't crank out the volume that the AP does, and we don't want to," said Shea. "We want our stories to be a cut above."

A typical issue contains two or three news stories, a couple of feature stories, an editorial by Shea, and perhaps an essay or humor piece. Within a month of the first issue, Shea was already making plans to add a sports page.

Already, the journalism world has taken notice: *The Baltimore Sun* and Associated Press were subscribers from the start, and other newspapers, including the *Indianapolis Star* and the *Atlanta Constitution-Journal*, have written stories about the venture. Meanwhile, people like Johnson are exploiting their professional contacts and encouraging them to read *The American Reporter* and consider buying its stories. Ideally, Shea said, the plethora of alternative weekly newspapers in American cities will start buying the copy. *The American Reporter* plans to charge a subscription rate of $100 annually plus $.01 per word for the rights to publish *American Reporter* stories in their editions, which is a bargain compared to even the cheapest syndicate.

Shea tries to keep the editions that are e-mailed to under 40,000 bytes, because some subscribers' mail readers cut off anything longer than 31,000 bytes. Those who have that problem are encouraged to go to *The American Reporter*'s Web site, which was getting thousands of hits daily just weeks after the first edition went out.

Thus far *The American Reporter* has survived, thanks to the willingness of its reporters, including Johnson, to write and not expect anything in return. "They have not made a penny yet from *The American Reporter*, but you wouldn't know it by the quality," said Shea. It helps that doing business on the Internet cuts down on the overhead, he added.

A drawback is that most of the reporters work for *The American Reporter* on this side—Johnson doesn't think the bombing could have been covered as well had it occurred in another city. "I could do this forever because I don't have much else to do," Johnson said. "Anybody else writing for it already has a full-time job," he said.

But Shea is learning to make the most of his resources. In addition to working with a few marketing experts to sell the publication to other publishers, he's looking for talent in unusual places, including colleges and universities, where journalism students are in abundance. And he has made the paper "reporter-owned," to allow for profit sharing and to give the publication a sense of autonomy and political objectivity that he feels is missing in mainstream papers today.

"We're all builders here," Shea said. "The future is the product, and we're chasing it."

(To subscribe to *The American Reporter*, send e-mail to **joeshea@netcom.com** with **subscribe AR** in the message body.) ■

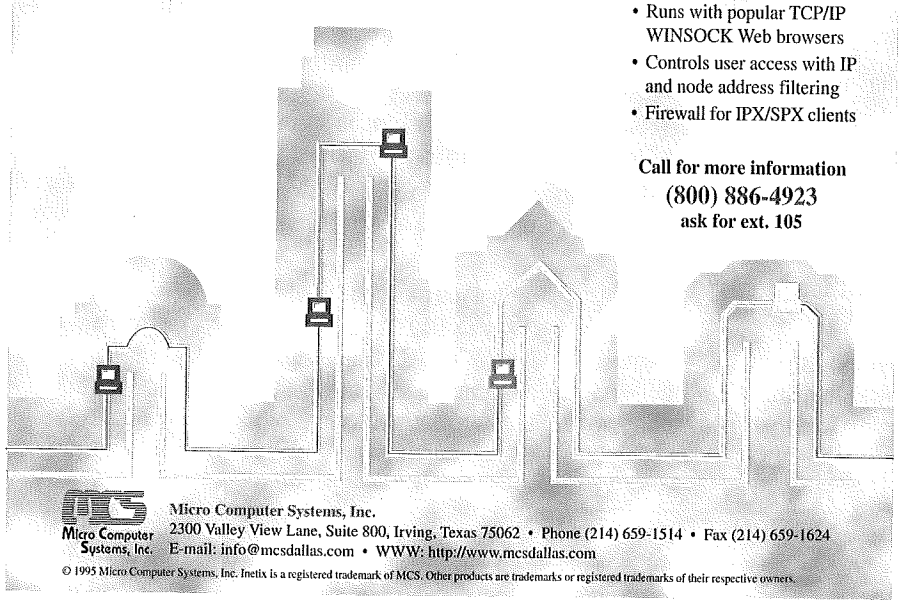
Ryan J. Donmoyer (donmoyer@netcom.com) is a news reporter and freelance writer based in Washington, D.C.

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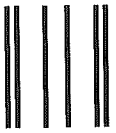
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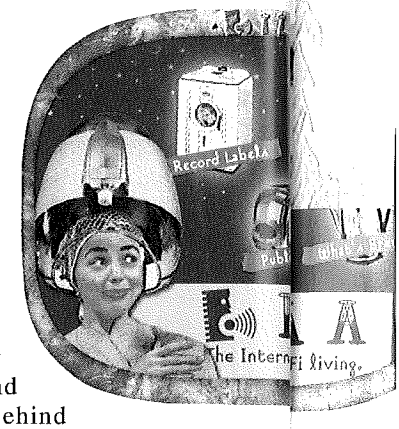
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CIRCLE NUMBER 69

'Zine Scene

The Net is spawning a new generation of underground literature. By Alex Swain



The 1960s opened doors to many things, including anti-authoritarianism, political activism, and a reaffirmation of free speech. One of the results of all this freedom was a gushing of self-righteous creativity, and from this well-spring the free press was born. It began with far-left publications written mostly by students. These were highly political and voiced any opinions the editors and writers wished to express. They also were among a breed of publications that tested First Amendment rights.

Soon after the '60s vanished, so did many of the publications. And when Vietnam ended, virtually all the free-press papers, most notably the student-run *The Berkeley Utopian*, ceased to exist. A certain hush fell over the free-press world, and all the big-time publicity associated with it completely disappeared.

While it seemed the small press had disappeared, it was merely metamorphosing. A slew of new publications appeared that were the smallest of the small. Called 'zines because they were only "half a magazine," they began creeping through the postal service for delivery to connoisseurs of the most specific topics. There were 'zines that discussed feminism, 'zines that followed bands or celebrities (called fanzines), and 'zines that discussed the mathematics behind Rubik's Cube. Science-fiction 'zines were another popular genre (see below).

'Zines continued to be published throughout the 1970s, reaching an estimated count of 3,000 by the end of the decade, and growing in number to 6,000 in 1985 and more than 16,000 in 1994. By 1990, editors and readers were questioning the underground philosophy behind many of them because they were approaching press runs of 20,000 and establishing national distribution.

As early as 1980, students, alumni, and government employees were actively involved in using the ARPAnet as a way to send mail, discuss theories, and otherwise network their creativity. Once they produced a product, they wanted to share it, so they would place it online for anyone to access at any time. Thus, journalism students would write stories and

SCI-FI CIRCUIT

Science-fiction stories and fandom make the move from pulp to 'zine. By Kurt Cagle

Way back in the 1930s, when even the concept of the computer existed only in the deepest realms of academia, science-fiction magazines began to spring up with names like *Amazing*, *Fantastic*, and *Weird Tales*. In addition to the lurid stories of alien space monsters stealing Earth's women (the covers illustrated with half-clad maidens shrieking as some slimy tentacled thing emerged from a saucer-like spaceship) there was in most of these magazines a Reader's Page, where fans could exchange information with other fans and with the writers. These columns evolved into 'zines (short for fanzines), in which fans could write their own stories, exchange information and polemics, and interact with other fans in the science fiction community.

These 'zines exemplified the best that a limited budget could produce: mimeographed pages on cheap pulp stock, their drawings typically primitive, sent through the mail at 3 cents an issue with the cost shared among the subscribers.

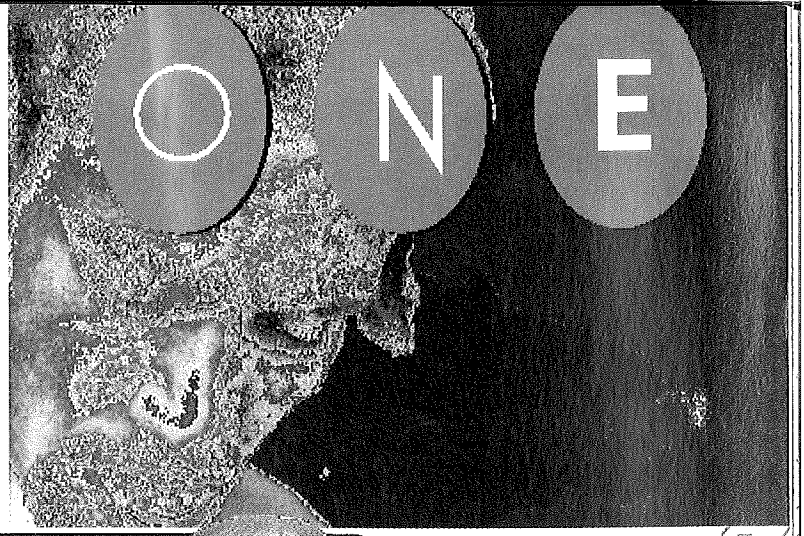
Fast-forward 60 years and many of the concepts dreamed of in those pages—television, moon shots, robots, and even computers—have materialized, sometimes centuries before they were anticipated, and things not even wildly guessed at have become commonplace (the importance of network-based communication, for example).

Many of the 'zine writers have gone on to become giants in the publishing industry, but the 'zines themselves have largely disappeared. Paper costs are skyrocketing as wood pulp becomes more costly to produce, and postage prices have jumped significantly in the last few years. But perhaps the most significant factor in the decline of the paper zines has been the rise of the Internet and online services.

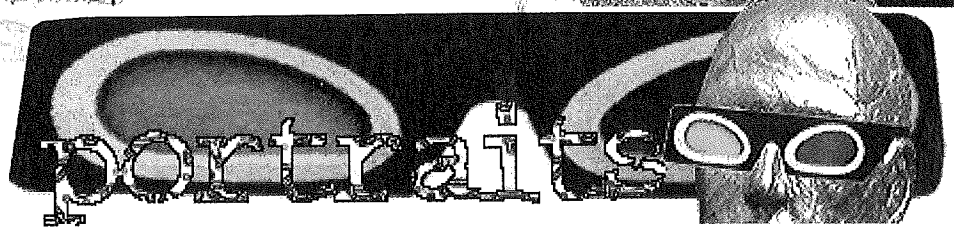
The 'zines served the purpose of communicating between people in the science-fiction (and later music) communities and as a means of networking. With a home computer and modem, though, the reasons for the existence of 'zines disappeared. Communication that took weeks can now be accomplished in seconds. The Internet and commercial online services provide a host of options that make even the most hard-core 'zine publisher drool with anticipation: timely transmission of information, the ability to display full-color graphics, instant feedback, and communication between the various readers of the publication. In some ways, the Internet can be thought of as a 'zine writ large—the ultimate fanzine. ■

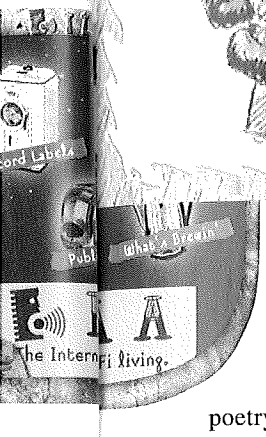
Kurt Cagle (caglek@aol.com) is a writer, illustrator, and multimedia developer in Issaquah, Wash.











Far left: Internet Underground Music Archive features music 'zines. Buzznet offers sci-fi and poetry, and ONE is a celebration of African heritage.

poetry and place them on the Net for others to read. This was the beginning of the electronic 'zine culture.

In the last five years the Internet population has exploded. Today almost every school or university offers its students Net access. The growth of the Net was accompanied by an increase in the number of e-zines which naturally fell into the domain of the Net due to the editors' interest in trying to be widely recognized. After the desktop publishing craze, half of all 'zines began surfacing in electronic form. This allowed editors to merely upload their files to a common site on the Net.

There are so many more 'zines on the Net, and so many new ones popping up every week, that it is impossible to provide a comprehensive rundown. To locate Internet 'zines, check some of the better sites devoted to tracking them.

One of the largest 'zine-archiving sites on the Net is the Etext Archives, run by Paul Southworth, Rita Rouvalis, and Jason Snell. The site is located at the University of Michigan and contains more than 200 e-zines available by Gopher at **gopher.locust.cic.net** in the 'zines directory; by FTP at **etext.org /pub/Zines**; and on the Web at **http://www.etext.org.** The Web site contains many hypertext 'zines and links to other places of relevance.

John Labovitz publishes a comprehensive, monthly, book-sized 'zine list describing several hundred 'zines and where to find them. It's a great resource for 'zine exploration and is available via Usenet in **alt.zines**, via anonymous FTP at **etext.org /pub/Zines/e-zine-list**, or on the Web at **http://www.meer.net/~johnl/e-zine-list.**

Another fine site for finding e-zines is the Electronic Frontier Foundation's Gopher at **gopher.eff.org /CuD** (Computer Underground Digest) or on the Web at **http://www.eff.org.** The EFF archive's technical e-zines generally pertain to hacking, phreaking, piracy, and other computer-related interests.

The nature of e-zines is much like their print counterparts: The majority of them are text only. However, dozens of 'zines are offered via the World-Wide Web with graphics and sound. When it comes to e-zines (and 'zines in general), there's something for everyone. Literary rant 'zines (*Cropduster,* located at the Etext archives), hate the world 'zines (see *Crank* at Etext), virus-making 'zines (*40hex* at EFF), and the official Church of the Subgenius 'zine (entitled *Holy Temple of Mass Consumption*, known as *HTOMC*, at the Etext Archives).

Intrrr Nrrrd (**http://www.etext.org/Zines/Intrrr.Nrrrd/intrrr.html**) is an e-zine that touches on punk rock and the do-it-yourself ethic, as well as covering and exploiting new technology. This is a well-crafted Web 'zine, complete with audio and video clips, and even an article about Atari 2600 games (complete with photos of cartridge boxes!).

And for those with more of a literary inclination, *Webster's Weekly* publishes stories, music reviews, political assertions, and discusses many facets of art culture. It is a weekly and is remarkably well-written. Point your browser to **http://www.awa.com/w2/front_page/fp3.4.html.**

E-zines are a superb way to disseminate information to the massive Internet population. Moreover, 'zines are remarkably unique (in a world full of cliché-ridden rag papers) and free. Only on the Net could 20 million people have access to 'zines dedicated to UFOs, girl-fronted bands, and cheddar cheese. ■

Alex Swain (swain@cybernetx.net) produces an e-zine called Whatever Ramblings *available by ftp at etext.org/Pub/Zines/WhateverRamblings.*

'Zine sources

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Tons of 'zines, including Factsheet-5, a 'zine that reviews 'zines, are at gopher.well.com/11/Publications

WORLD-WIDE-WEB

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http://www.loria.fr/~charoy/zines.html
A French site with exhaustive pointers to 'zines worldwide.

John Labovitz's E-zine List
http://www.meer.net/~johnl/e-zine-list/index.html

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Net Newsletters at a Crossroads

The rise of the World-Wide Web is causing older publishers to revise their plans.

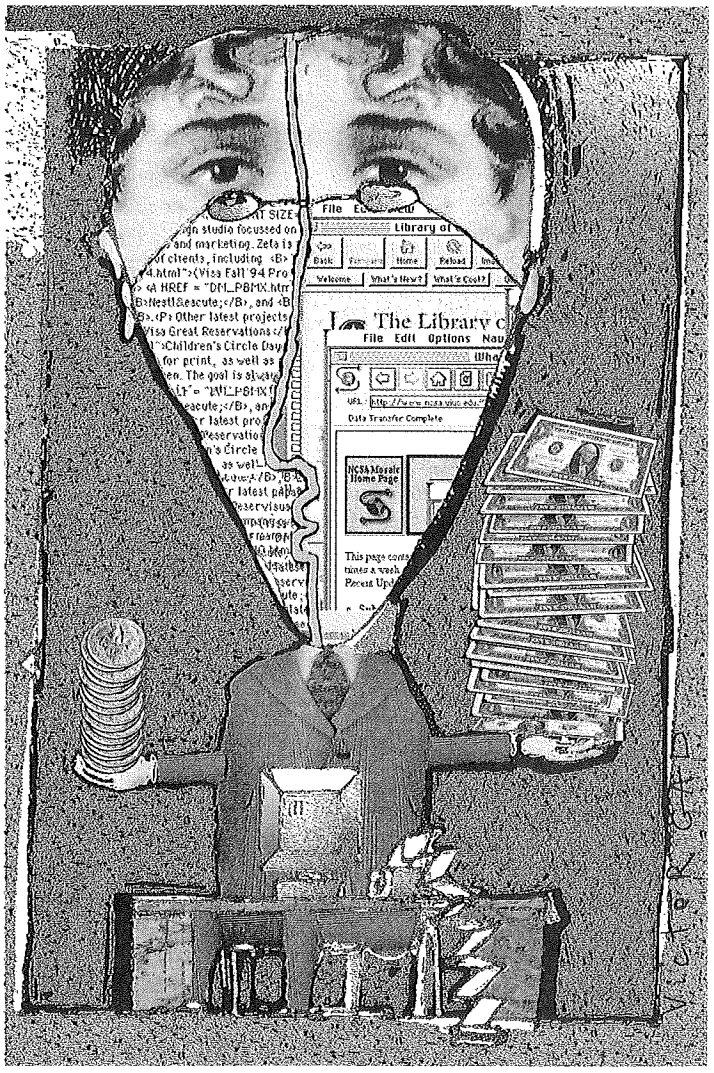
By Rosalind Resnick

Few people know Internet newsletter publishing like Tom Tabor. In 1991, his company launched a newsletter called *HPCWire* from the ashes of a print magazine called *Supercomputing Review*. Since then, he has built it up to 8,000 paid subscribers and commands $4,000 for weekly advertising spots from the likes of Cray, DEC, and IBM. Last year, Tabor launched *WEBster*, a Web-based magazine about World-Wide Web developments, which now has 7,000 paid subscribers and sells ad packages for $10,000 per year. Although Tabor won't disclose each magazine's individual revenues, he said the company as a whole should "break seven figures" this year.

Despite his success, Tabor has found himself at a crossroads. Although *WEBster* has won favorable reviews and a strong following, advertising has been soft and site traffic has diminished since the initial burst of publicity surrounding its launch. Meanwhile, Internet publications that distribute their editorial content for free (such as *Wired* magazine's *HotWired*) are attracting heavy readership and big-dollar advertising that *WEBster* would like to have. As a result, Tabor said he was considering dropping the $29 yearly subscription fee for WEBster.

"If you're going to play against *HotWired*, you've got to be free," Tabor said. On the other hand, he noted, "The world is made up of a select number of *HotWired*s, and there are thousands of small publishers like us that need a real economic model. We can't just go to Ford's ad agency and say, 'Here's a great spot for you and it's only $15,000 a month.'"

Tabor's dilemma is not unique. With the Internet increasingly dominated by the World-Wide Web, electronic newsletter publishers must make some tough choices, including whether or not to change publishing platforms. Internet newsletters have been distributed primarily via e-mail, a low-cost publishing method that lets practically anybody with $20-per-month Internet access and a good idea enter the game. Now that the Web has surged to prominence as a publishing platform, online publications must be graphical and interactive if they want to attract a following—and that takes money.



Another tough choice involves advertising. Internet newsletters that target niche markets such as the supercomputing industry typically make much, if not all, of their money by selling subscriptions. This fee-based economic model flies in the face of a Web-based publishing model that seeks to attract the broadest possible audience by giving away content and convincing advertisers to pay the freight.

Can Internet newsletters survive the Web? The answer is probably yes. However, the day of the e-mail-only Internet newsletter is rapidly waning and publishers are going to have to learn to embrace the Web and start hustling for advertising if they

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Newsletter publishers are going to have to learn to embrace the Web and start hustling for advertising if they want to survive.

want to survive. They may even have to abandon their cherished subscription fees.

Following is how four Internet newsletters are preparing for the future:

HPC WIRE

One of the Internet's first fee-based newsletters, *HPCWire* is hanging tough by cementing the loyal reader and advertising base it has built up over the last four years. *HPCWire* charges $100 a year for the first subscription at a site plus $57 for each additional user. Advertising accounts for a healthy 60 percent of the publication's revenue, according to Tabor.

There are three secrets to this newsletter's success:

- It is a business-to-business publication that targets the supercomputing industry rather than the average Internet user.
- It distributes its table of contents and advertising for free to anyone who requests it via e-mail, and encourages sharing, thus generating a pass-along rate of 90 percent and boosting its total paid and non-paid subscriber base to 38,000 readers.
- It has established sufficient editorial credibility to make itself the bible of its industry.

"We don't have to persuade 100,000 people to read *HPCWire*," Tabor said. "We're looking to reach 30,000 business readers."

According to Tabor, the startup costs for *HPCWire* ($250,000 for an IBM RS/6000 computer, a T1 connection, and the talent of a top programmer) were recouped almost immediately by the sale of $10,000-a-year sponsorships to major advertisers like Cray, DEC, and Fujitsu. Subscriptions have been coming in at a rate of $20,000 per month, he said.

But *HPCWire* isn't resting on its laurels. Tabor said he planned to make the e-mail-only newsletter available on the Web and accessible by a user ID and password. One thing Tabor isn't planning to change, however, is *HPCWire*'s subscription price. "I cannot walk away from the amount of money generated by paid subscriptions," he said.

FLASH BACK

FlashBack is a for-profit spin-off of *The SunFlash Monthly Digest*, a free e-mail newsletter that has been published by Sun Microsystems since 1988. *SunFlash* uses a mailing list of 140,000 subscribers worldwide to circulate a summary of articles and press releases of interest to Sun users, developers, network administrators, value-added resellers, Sun employees, and others. *FlashBack*, edited and published by *SunFlash* editor John McLaughlin, is also free, but sponsors pay a fee to post their newsletters, press releases, announcements, and other documents to the *FlashBack* list.

McLaughlin said he's betting *FlashBack*'s success on many of the features that have made *SunFlash* so popular:

- A large global subscription base (more than 140,000 subscribers in more than 90 countries).
- Comprehensive editorial content (30 to 100 articles a month comprising 100 to 300 pages).
- A strong following among Sun employees (roughly 10 percent of Sun's 1,300-plus employees).
- Multiplatform availability (via e-mail, full-text on-demand, FTP, newsgroups, the Web, and soon search engines such as Infoseek).

While subscriptions are free, advertising rates are $500 for an annual membership that includes two sponsored articles; $1,900 for four quarterly articles (which includes annual membership); $5,600 for 12 monthly articles; $2,700 for six articles per year; $6,000 for 12 articles per year; and $10,000 for 24 articles per year.

In McLaughlin's view, the World-Wide Web is no threat to his e-mail newsletter because he also makes it available on more than a dozen mirrored Web sites worldwide. The way McLaughlin sees it, the future of Internet newsletters is multimedia e-mail, Adobe Acrobat's PDF format (see "Adobe Casts Its PDF Net," pg. 70), and "close integration with Web publishing."

EDUPAGE

Edupage is a newsletter written and published by John Gehl and Suzanne Douglas and sponsored by Educom, a Washington-based association of colleges and universities. Launched in March 1993 and published three times a week, the 3,000-word newsletter features summaries of news stories from *The New York Times*, *The Wall Street Journal*, *Investors Business Daily*, and other leading publications.

Approximately 40,000 subscribers receive *Edupage* for free through an Internet mailing list. *Edupage* also is reposted by permission on numerous Web and Gopher sites, corporate and campus information systems, and computer bulletin boards worldwide. Estimated readership is in the hundreds of thousands. *Edupage* helps promote *Educom Review*, a bimonthly print magazine on learning, communications, and information technology that charges $18 a year for subscriptions.

Edupage accepts no advertising, and Gehl said he believed that an e-mail newsletter probably did not have as much chance of attracting big-dollar advertising as did a Web-based publication. *Edupage* began publishing on the Web over a year ago.

Encouraged by their success with *Edupage*, Douglas and Gehl have launched another Internet newsletter called *Innovation*, which has a broader focus than *Edupage* and covers business and technology trends, strategies,

Where to Find Net Newsletters

Edupage
http://www.edupage.edu

FlashBack
http://www.flashback.com

Interactive Publishing Alert
http://www.netcreations.com/ipa

WEBster
http://www.tgc.com/webster.html

General Directory
http://yahoo.com/computers/Internet/Newsletters

and innovations. Because *Innovation* charges a modest annual subscription fee of $15, Gehl said he didn't expect to get "anywhere near the circulation of *Edupage*." But, he noted, "We're already developing a loyal and enthusiastic following."

According to Gehl, "The future of Internet newsletters depends entirely on the quality of the newsletter. There's nothing magic about the Internet. It's just faster. People will or won't want to read what you've written. If they will, your newsletter may have a future."

INTERACTIVE PUBLISHING ALERT

With my own newsletter, *Interactive Publishing Alert* (*IPA*), I'm experimenting with fee-based and advertising models. Building on my five years experience at *The Miami Herald* and freelance writing about online services and the Internet, I launched *IPA* in February 1994 to help newspapers and magazines go online. Seven hours after posting my first press release on the net-happenings mailing list, I snagged my first subscriber, Ziff-Davis.

Since then, I've boosted my circulation base to approximately 120 subscribers, including *The New York Times*, *The Washington Post*, America Online, Apple, and Microsoft. Despite everything I've preached to my subscribers about giving it away for free, I've raised my annual subscription price from $149 to $295 a year. To justify the price hike, I doubled my publication frequency from once a month to twice a month and added an interactive discussion group. I've also signed a licensing deal with Interactive Newspapers, Inc.—a joint venture of The Kelsey Group consulting firm and *Editor & Publisher* magazine—to produce a hard-copy edition of *IPA* for $345 a year and market it through traditional direct-mail and telemarketing channels.

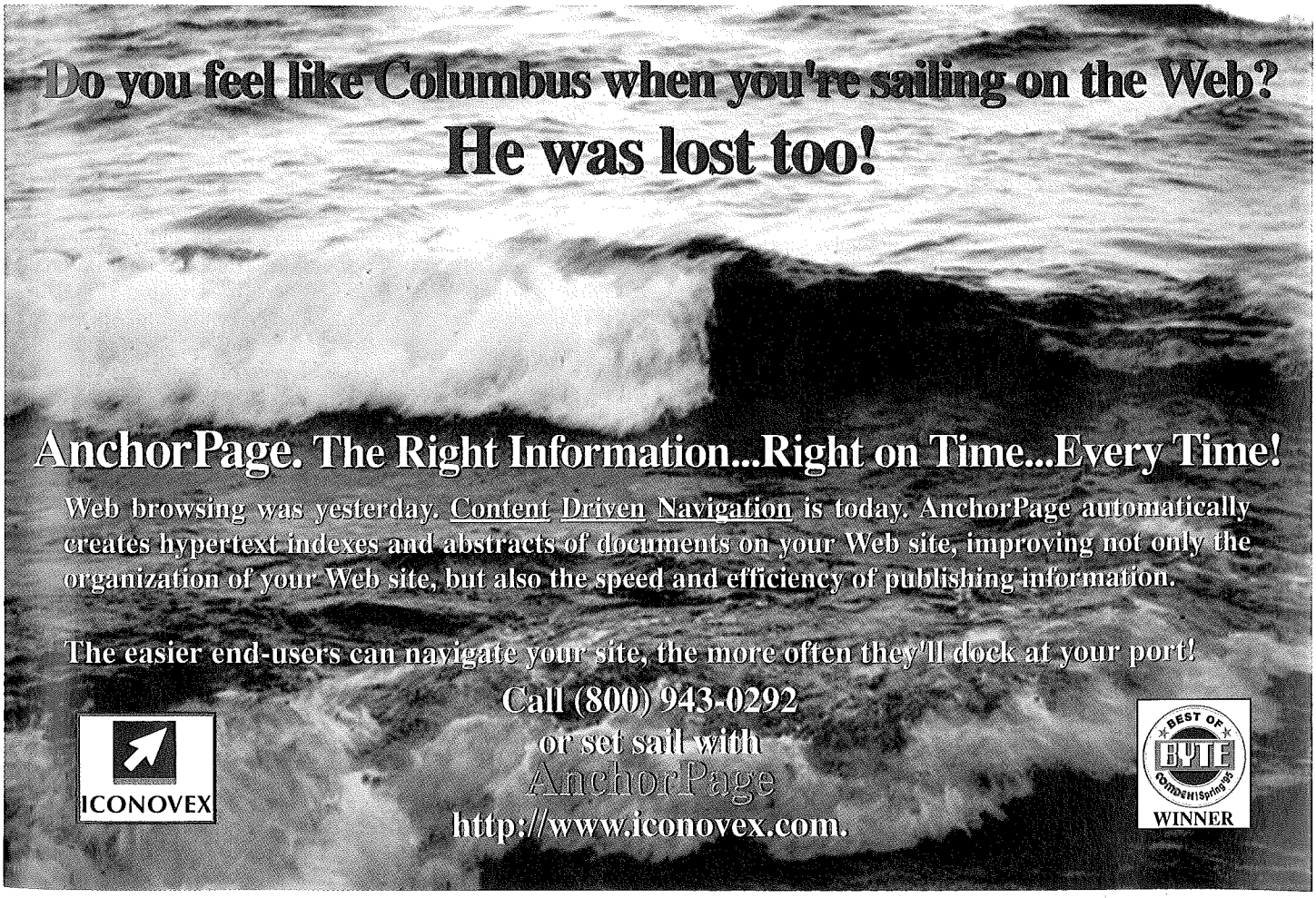
I hired an assistant to help review online publications and produce periodic research reports, such as *IPA*'s 1995 Survey of Women Online (sponsored by Apple). The full-text of *IPA* is now available on the Web (with user IDs and passwords required) and via e-mail. I'm also adding free content to my Web site, such as The *IPA* Online Advertising Index, in the hopes of generating more traffic and making the site attractive to advertisers targeting the publishing industry (like Apple). From February 1994 until today, *IPA* has generated more than $50,000 in revenues and relatively little in the way of costs.

What's the future of Internet newsletters? As we've already discussed, two clear trends are the rapid migration of newsletters from e-mail to the Web and the shift from subscriptions to partial or full advertising support.

Said *HPCWire*'s Tabor, "Today, I think e-mail is the killer app. Within a year and a half, it'll be a combination of e-mail and the Web. E-mail is still the electronic communications tool for the overwhelming majority of the network."

Can Internet newsletters survive the Web? I only wish I had a crystal ball. ■

Rosalind Resnick (rosalind@harrison.win.net) is editor and publisher of Interactive Publishing Alert, *an Internet newsletter that tracks online newspaper and magazine publishing.*



CIRCLE NUMBER 99

TELECOM MAN

Telecom Digest editor Patrick Townson's work has earned him some funding. By David Appel

As editor of the *Telecom Digest*, Patrick Townson spends five to six hours a day putting together a worthwhile product for his readers. And now he's getting paid.

Once strictly for professionals in the telecommunications industry, readership of the *Telecom Digest* has grown steadily along with the Internet. It is now open to anyone with an interest in telephones, telephone networks, and electronic communications, including the Internet itself. Five thousand readers receive two or three Digests a day through e-mail, and about 60,000 people read it on the Usenet group **comp.dcom.telecom**. In addition, Townson maintains an extensive archive site. Many of his readers are on services such as CompuServe and America Online, which initially ignored the copyright carried by the *Telecom Digest*.

"CompuServe or America Online sign up for AP news, the weather service, or horoscopes," Townson said, "and they pay good money for those, and they charge their readers. They also charge their readers to read my Digest, but initially weren't paying anything for it."

So Townson went to both and said, "You're going to have to give me something or I'm going to cut you out of the feed." When told he couldn't do that, he said, "You wanna bet," and explained that with his knowledge of the Network News Transfer Protocol he could block his Usenet feed from specific computers. After a call to their lawyer, AOL gave in, as did CompuServe, and both services now pay him a commission based on the number of readers on their end who pull his messages—which adds up to about $200 per month per service. It's something he feels more moderators should do.

Townson, 52 years old and from Skokie, Ill., takes his job seriously, as readers of his *Digest* can attest. They receive the latest on happenings in the telecommunications world, from discussion of new technologies to analyses of long-distance calling plans and other marketing ploys. Townson sees the primary role of the *Digest* as educational, and largely lets readers decide which topics to cover. One week you might find a discussion of an earthquake's effect on regional communications, and the next will deal with an Internet crisis of the week, often from people well-positioned to know the facts. And punches are not pulled against the telecom's corporate behemoths.

"In the 1950s and '60s the telephone company was a big secret," Townson said. "Nobody knew how it worked except the phone company, and that was good enough for them, and if you knew anything about it at all the phone company's attitude was that you knew too much for your own good. Pick up a receiver and make a call was all you needed to know."

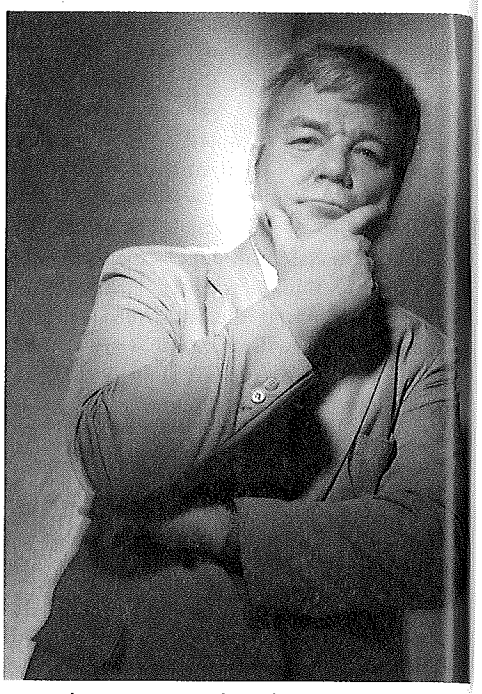
Townson knows a lot more than that. Spending most of his life in Chicago, he worked as a switchboard operator at the University of Chicago while still in high school. In the mid-1960s he worked as a telegraph and switchboard operator for the B&O Railroad and helped his father with telephone installations. As the times progressed, he learned to maintain companies' PBXs, and expanded his interest into CB radio, and eventually computers and the Internet. He ran a BBS for the Chicago Public Library as early as 1978, and began reading the *Telecom Digest* in 1986, which had been started by Jon Solomon five years earlier. Townson became its editor in 1988.

But to do the job well takes a good deal of his time. "If you have to work on it for many hours a day you've got to do something else to eat," he said. And so last year, instead of giving up his voluntary role as editor, as many might have, he asked for support from his readers and from the industry itself.

"I suggested my readers pay $20 per year," Townson said, and now about 10 percent of them do. In addition, he has received grants from the International Telecommunications Union (ITU) in Switzerland, and recently from Microsoft. He now makes about half his income from his electronic journal, which is "unique as far as I know," he said.

With the recent growth and change in the character of the Internet, Townson sees an increasingly important role for editors. "I used to religiously read about 20 different newsgroups," he said of the good old days of the 1980s. "There were a few legitimate newsgroups filled with very interesting material by a few people." Now he sees mostly noise and not a few crazies, which he believes will lead to the demise of Usenet, as it did to CB radio.

The newsgroup of the future, Townson said, will be a well-moderated, highly edited e-zine or e-journal format. ■



Patrick Townson: "Quality editors should be paid."

How to Get *Telecom Digest*

The *Telecom Digest* can be read in the moderated comp.dcom.telecom newsgroup. For e-mail subscriptions, send your request to telecom-request@eecs.nwu.edu. ***Telecom Digest* archives are available by anonymous FTP at** lsc.mit.edu /Telecom-archives **and through the Telecom-archives e-mail service (**tel-archives@lcs.mit.edu**). For a file explaining how to use the service, send the following three lines in the message body to** tel-archives@ lcs.mit.edu**:**

REPLY
HELP
END

or ask for one from the Telecom-request address above.

Patrick Townson can be reached at telecom@eecs.nwu.edu.

David Appell (appell@asu.edu) is a freelance writer in Tempe, Ariz.

Photograph by Kurt Gerber



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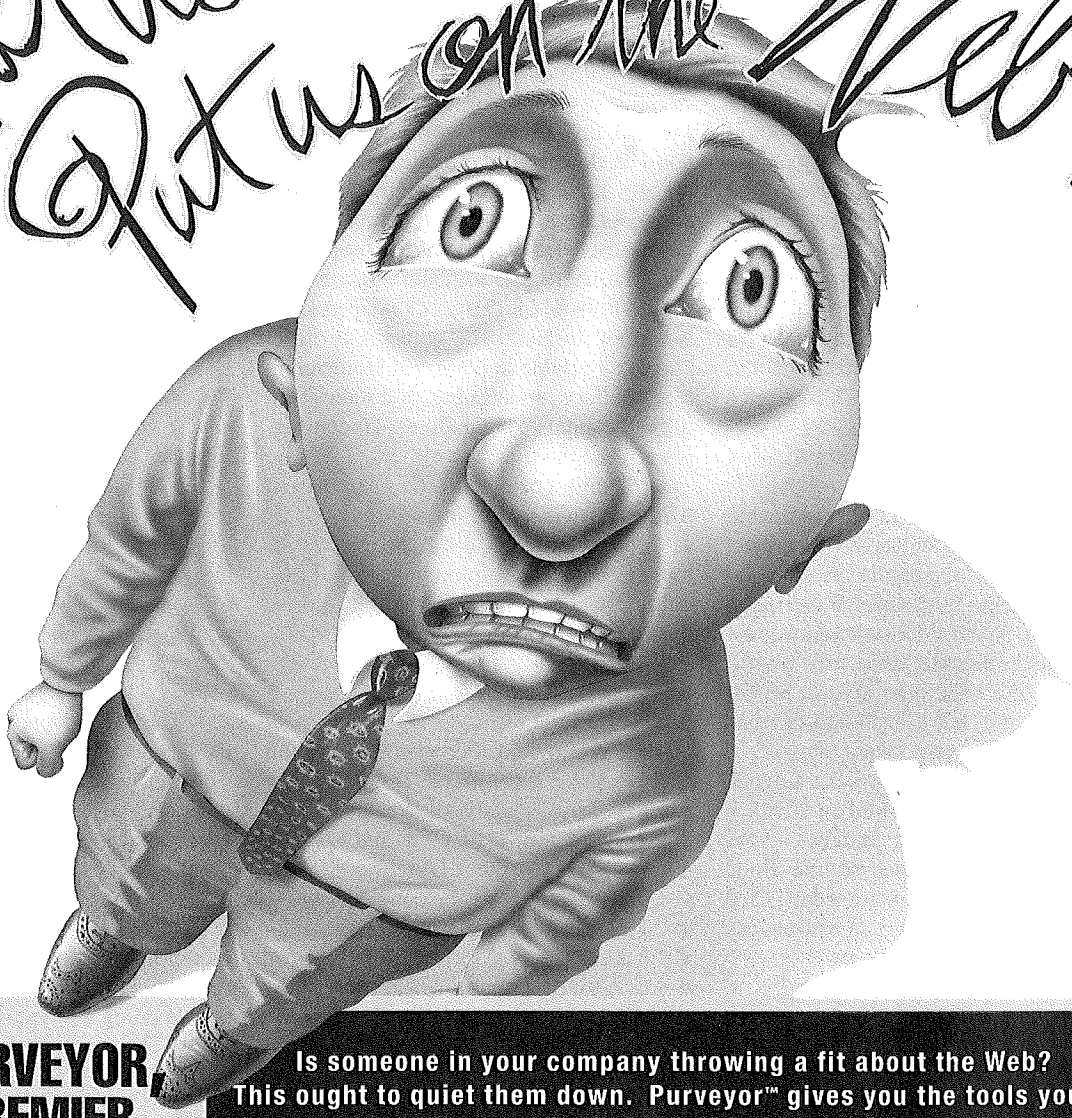
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CIRCLE NUMBER 65

The Digital

Project Gutenberg and other ventures are putting classics on

Would you like to have the world's great literature at your fingertips? Click on a mouse and download Dickens or Twain, Shakespeare or Shelley? Make room for Charles Darwin on your hard drive without emptying your wallet?

Then you'll want to keep up with Project Gutenberg, the brainchild and life's work of Michael Hart. You'll also want to know about Columbia University's Project Bartleby and an index named Alex.

Hart, a Professor of Electronic Text at Illinois Benedictine College, began Project Gutenberg "to encourage the creation and distribution of English language electronic texts" and to make public-domain documents available electronically. "We are trying to get into other languages, so far Italian and Latin, but French and German are on the way," he says.

Hart envisions the day when anyone can plug into the Internet and find a library that is vast, public, and free—or at least so inexpensive that no one cares about the cost. His ultimate goal is for you to be able to download an entire work for a penny.

The aim of Project Gutenberg is to provide a library of 10,000 of the most-used public-domain electronic texts at your beck and call by the end of the year 2001. Today the number of e-texts stands at about 250, or about 2.5 percent of the goal, with many more books in the works. (A list of available fiction and nonfiction titles resides at **http://jg.cso.uiuc.edu/pg/lists/alpha.html** and **/subject.html**, respectively.)

Hart has directed Gutenberg since 1971, when he thought he might have been the hundreth person on the Internet. He typed in the Declaration of Independence and sent it to his colleagues. "People said I was crazy to want books on computers," he said.

Project Gutenberg informally classifies the texts in three basic categories: light, such as *Alice in Wonderland*; heavy, such as the *King James Bible*; and reference, such as *Roget's Thesaurus*. You can look up individual words in *Roget's*, or you can download the entire work. There are also music-, computer-, and math-related works, including the square root of the number two out to five million places.

The strategy is to make files accessible to "99% of the general public," according to Hart. The secret is to make all files available in plain ASCII, meaning that boldface, underlining, and italics turn into all capitals so that almost all computers can use the files.

"It only costs about one cent to put *Alice in Wonderland* on a floppy," Hart said. "Say a nickel, dime, or quarter for longer books." He pointed out that you could fit about 1,000 pages on a compressed 1.44MB floppy disk.

Hart means the text to be for free distribution, so you can find significant portions of Project Gutenberg material in commercial media. For example, Simon and Leonhard's *PC Mom: The Mother of All PC Books* (Addison Wesley, 1994) comes with a pair of CDs that include material from Project Gutenberg. So if you just have to have the complete works of Shakespeare but don't want to spend all that time downloading files from the Internet, you can find them in one of the CDs that comes in the back of *PC Mom.* Walnut Creek also publishes Project Gutenberg's public-domain material on CD-ROM.

If Hart has his way, you'll eventually be able to download a 10,000 volume library for about $100 plus the cost of distribution media. If only 10% of the nation's 100,000 libraries cooperated, according to Hart, the result would be a "truly public library" where books would never need to be reserved, reprinted, rebound, or reshelved, and where there would never be a waiting list. "All materials will be available to all patrons from all locations at all times," he said.

What books are next on Project Gutenberg's agenda? There are no set priorities except to publish the texts that are likely to have the most use, said Hart. Eventually he hopes to publish works soon after they enter the public domain.

Hart does not do all of this work alone. He heads a legion of more than 500 men and women who type, scan, proofread, check copyrights, and assist other volunteers.

Who are some of these people helping to make Gutenberg succeed? Bob Zeuschner, a philosophy professor at Pasadena City College, is one of the newer volunteers. As a book lover and scholar, Zeuschner said he finds Project Gutenberg "the perfect place to explore." In particular, he admires the stories of Edgar Rice Burroughs. The project gives him the chance to make the "real words" of Burroughs available to anyone who wants to read them, as opposed to the "stupid and infantile 'Tarzan' of movies, comic books, and popular culture."

Rick McGowan calls himself one of the "lightweights" and "casual dabblers" who put in a couple of hours a week on tasks such as removing hyphens and page numbers. McGowan thinks "it would be great to have lots of books online," and feels an obligation to help make it happen. "I'd feel pretty slimy downloading month after month without giving something back," he says. "If you have enough people doing a little bit, it adds up."

If you hope to find medieval literature on the Internet, you have a kindred spirit in Douglas Killings. And if one day you find Chaucer's *Troilus and Criseyde*, or all 38,000 lines of Ariosto's *Orlando Furioso*, that will be due to Killings' efforts. He tries to devote an hour a day to his texts, and sometimes makes a whole evening out of it. "It's cheap entertainment," he said.

One of the more active volunteers has been Geof Pawlicki, who has worked to secure corporate grants for Project Gutenberg. Among his contributions are Shakespeare's *Antony and Cleopatra* and Beethoven's *Fifth Symphony* (in a MIDI file). He has long been frustrated by the restrictive

Press

ics o e Net.

By Robert Sanchez

approaches that libraries and academia have taken to managing information, he said. He hopes that universal availability of "high-quality public domain information in a relatively sexy environment" will spur an "intellectual renaissance on an individual scale."

In the past Pawlicki has spent up to 30 hours per week on Project Gutenberg, because he finds it "among the most uniquely worthwhile ventures . . . undertaken by anyone, anywhere. I am very proud of having been able to contribute to Gutenberg's success."

Among the volunteers for Project Gutenberg are a number of lawyers who donate their time to verify the copyright status of specific works. The project needs increasing numbers of volunteers: attorneys to verify copyright status, and others to collect, type, scan, edit, or coordinate. About 520 people actively support the project with a part of their free time.

The amount of time people donate varies widely. Rick McGowan said he used to put in three to five hours a week on mundane editing chores until he "got wise and made a program" to do it. Arthur Smith has spent "maybe 200 hours over the last five years." And Alan Light said he spends "far too much" time, adding, "I have to get a paying job."



Illustration by Gary Hovland

Project Gutenberg offers more than public-domain texts that people access about 350 times daily. Pawlicki plans to follow up his Beethoven contribution with Haydn's *104th Symphony*. "We want to do all the classics," Hart said.

One of the major frustrations Hart faces is not a lack of volunteers, although he always needs more, rather the conflict with people who want to keep material out of the public domain. In recent years, the copyright laws have tightened to keep publications out of the public domain until 75 years after an author's death. Hart had originally planned to publish the works of Hemingway, but the 1975 U.S. Copyright Act prevents that. Now legislation is pending in Congress that would further tighten restrictions. Hart fears that if Congress keeps making the copyright restrictions longer, no text written after 1919 will ever enter the public domain.

"We are all going to have the ability to store the Library of Congress on drives that will be available during our lifetimes," Hart said, "but I am not sure that a society based on limited distribution will let us do it."

However significant, Project Gutenberg is not alone in publishing free texts on the Internet. As you would expect from a Web site, Gutenberg also has pointers to a number of other electronic text resources. A growing number of initiatives are underway for storing and indexing public-domain literature.

PROJECT BARTLEBY

"Imagine borrowing a book from the other side of the planet without leaving your desk," reads the introduction to the Project Bartleby home page. The Columbia University World-Wide Web server for Project Bartleby is billed as "The Public Library of the Internet" and contains a small archive of texts (see sidebar). If

"Imagine borrowing a book from the other side of the planet without leaving your desk," reads the Project Bartelby home page.

your computer is configured properly, you can receive a recorded welcome at the Bartleby page. Columbia University says Project Bartleby is "considered the finest example of public electronic publishing—maintaining strict editorial and quality-control procedures."

ALEX

If you want to know what literature lies within the Net, Alex is an excellent place to begin. This catalog of electronic texts regularly locates information from a wide variety of sources, including those mentioned in this article. Hunter Monroe created this index while doing graduate work at Oxford University. "Alex gets about 40,000 hits a week," Monroe says. "The job of adding new books has gotten out of hand, so we are looking for ways to involve professional library catalogers."

BANNED BOOKS ONLINE

Psst, buddy. Want to read *Little Red Riding Hood*? Someone, somewhere has tried to protect the public from all of the books listed on this Web site, including *The Bible*, *The Qur'an*, *Ulysses*, *The Age of Reason*, *Little Red Riding Hood*, and many more.

HUMAN-LANGUAGES PAGE

This page began out of one man's inability to find Spanish lessons online. Willamette University student Tyler Jones maintains the Human-Languages Page, which contains a large list of links offering information of one kind or another on about 50 earthly languages, plus Klingon. Jones said he wants "to make the world a little smaller by making the languages of the world more accessible" by creating a repository of translating dictionaries and tutorials for languages all over the world. For example, you can take French lessons, learn how to display Chinese characters in Microsoft Windows, or read Bulgarian poetry.

Most emphasis has been on European languages so far, but Jones wants to include more languages as expert contributors come along. "The H-L Page doesn't itself offer much in the way of content," Jones says, "but it is a quick and comprehensive index to services."

THE CHILDRENS' LITERATURE WEB GUIDE

This is not a repository of literature, but an excellent resource for parents that includes best-seller lists and thumbnail sketches of some books.

All indications are that the Internet's digital archives will continue to grow. So take advantage of the electronic storehouses from which you can call forth the classics. ■

Robert Sanchez (bsanchez@tiac.net) is a technical writer and literature lover who lives in North Billerica, Mass.

Digital Directory

PROJECT GUTENBERG
Via FTP from ftp.cdrom.com **or** mrcnext.cso.uiuc.edu **in the** /pub/gutenberg/etext*nn* **directories. Also at** http://jg.cso.uiuc.edu/pg/pg_home.html.

Partial Listing of Gutenberg Texts
In the /etext75 directory:
The United States Constitution; const11.txt

In the /etext89 directory:
The Bible, **both testaments, King James version;** kjv10.txt

In the /etext91 directory:
Alice's Adventures in Wonderland, **by Lewis Carroll;** alice30.txt
The Book of Mormon; mormon13.txt
The Federalist Papers; feder16.txt
Roget's Thesaurus; roget13a.txt

In the /etext92 directory:
The Gift of the Magi, **by O Henry;** magi10.txt
The Oedipus Trilogy, **by Sophocles;** oedip10.txt
The 1990 U.S. Census; uscen903.txt

In the /etext93 directory:
Tarzan of the Apes, **by Edgar Rice Burroughs;** tarzn10.txt
Thuvia, Maid of Mars, **by Edgar Rice Burroughs;** mmars10.txt
The Wonderful Wizard of Oz, **by L. Frank Baum;** wizoz10.txt
The first 100,000 prime numbers; prime12.txt

In the /etext94 directory:
The Autobiography of Ben Franklin; bfaut10.txt
The Complete Works of William Shakespeare; shaks12.txt
The Insidious Dr. Fu Manchu, **by Sax Rohmer;** fuman10.txt
The Rime of the Ancient Mariner, **by Samuel Coleridge;** rime10.txt
Summer, **by Edith Wharton;** summr10.txt
Tess of the d'Urbervilles, **by Thomas Hardy;** tess10.txt
Treasure Island, **by Robert Louis Stevenson;** treas10.txt
The 1994 CIA World **Factbook;** world94.txt
The square root of two (to 5 million digits); 2sqrt10a.txt

In the /etext95 directory:
The Rubaiyat of Omar Khayam, **translated by Edward Fitzgerald;** rubai10.txt
Sons and Lovers, **by D. H. Lawrence;** sonsa10.txt

PROJECT BARTLEBY
http://www.columbia.edu/~svl2
The contents of Project Bartleby are:
Bartleby the Scrivener, **by Herman Melville**
Complete Poetical Works, **by Percy Bysshe Shelley (under development).**
Complete Poetical Works, **by William Wordsworth**
Familiar Quotations **(9th Ed.), by John Bartlett**
Inaugural Addresses of the Presidents of the United States
Leaves of Grass, **by Walt Whitman**
The Odyssey of Homer, **George Chapman, trans.**
Poems, **by Oscar Wilde**
Poetical Works, **by John Keats**

OTHER DIGITAL LIT SITES
Alex Catalogue of Electronic Texts:
Gopher to gopher.lib.ncsu.edu **select** NCSU's "Library Without Walls" **then** Electronic Journals and Books **then** Alex; **or** http://www.lib.ncsu.edu/stacks/alexindex.html

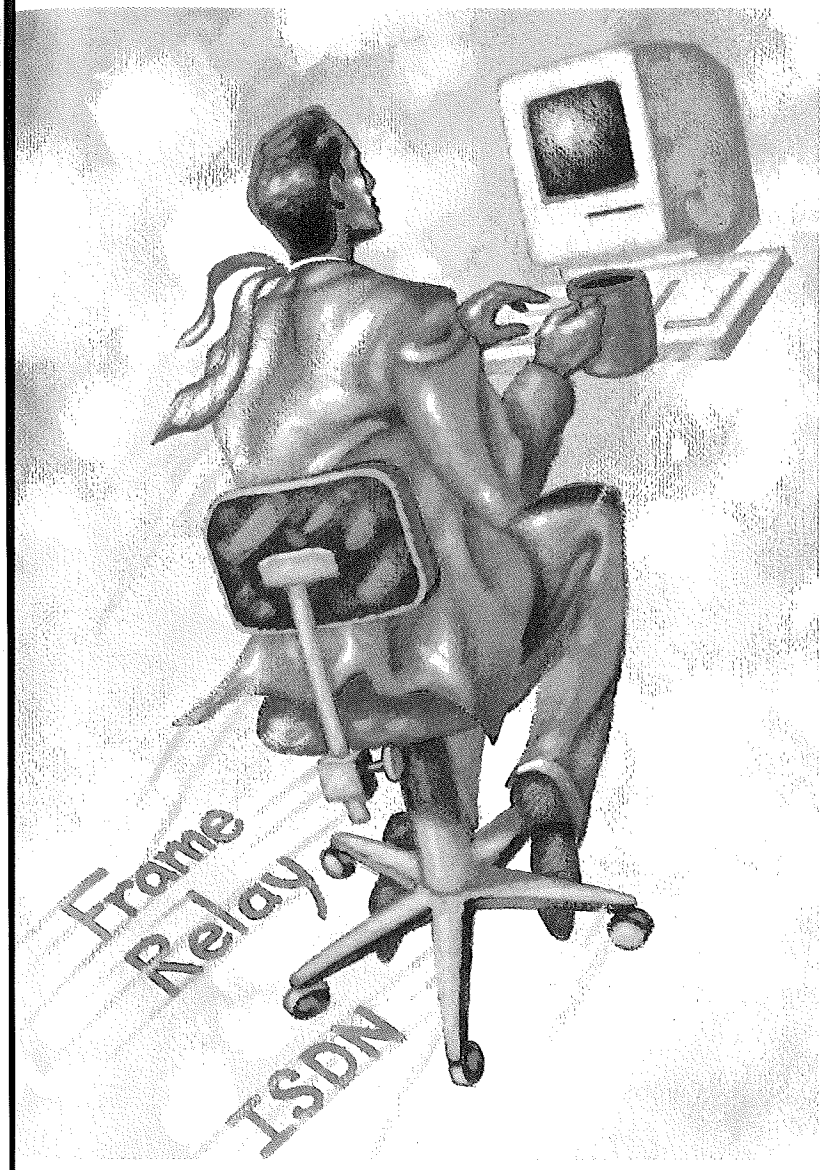
Online Books Page:
http://www.cs.cmu.edu/Web/books.html

Banned Books Online:
http://www.cs.cmu.edu/Web/People/spok/banned-books.html

Human-Languages Page
http://www.willamette.edu/~tjones/Language-Page.html

The Childrens' Literature Web Guide
http://www.ucalgary.ca/~dkbrown

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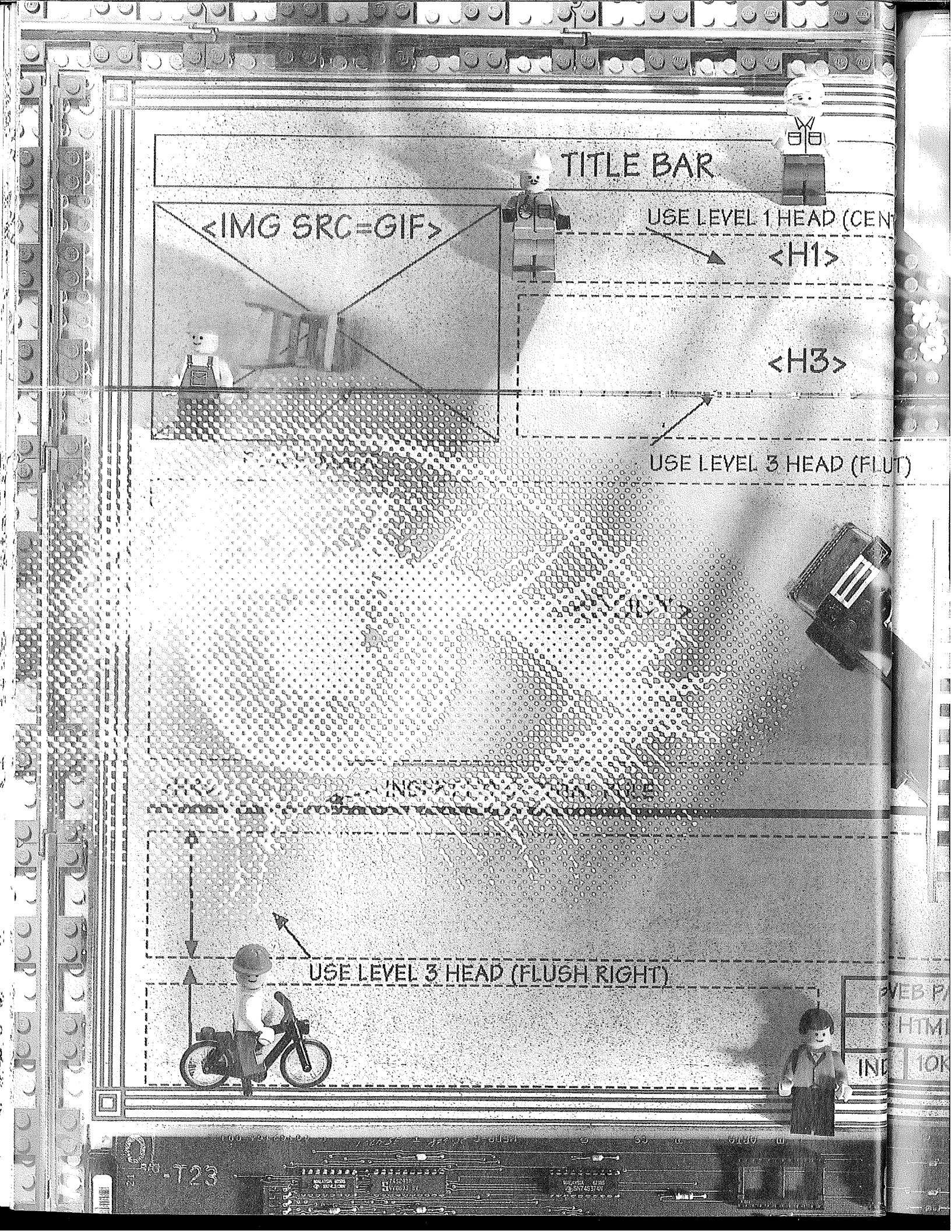
Sept. 7 - Washington, DC	Sept. 15 - Los Angeles, CA
Sept. 11 - Miami, FL	Sept. 18 - San Francisco, CA
Sept. 12 - Atlanta, GA	Sept. 19 - Seattle, WA
Sept. 13 - Chicago, IL	Oct. 2 - New York, NY
Sept. 14 - Dallas, TX	Oct. 3 - Boston, MA

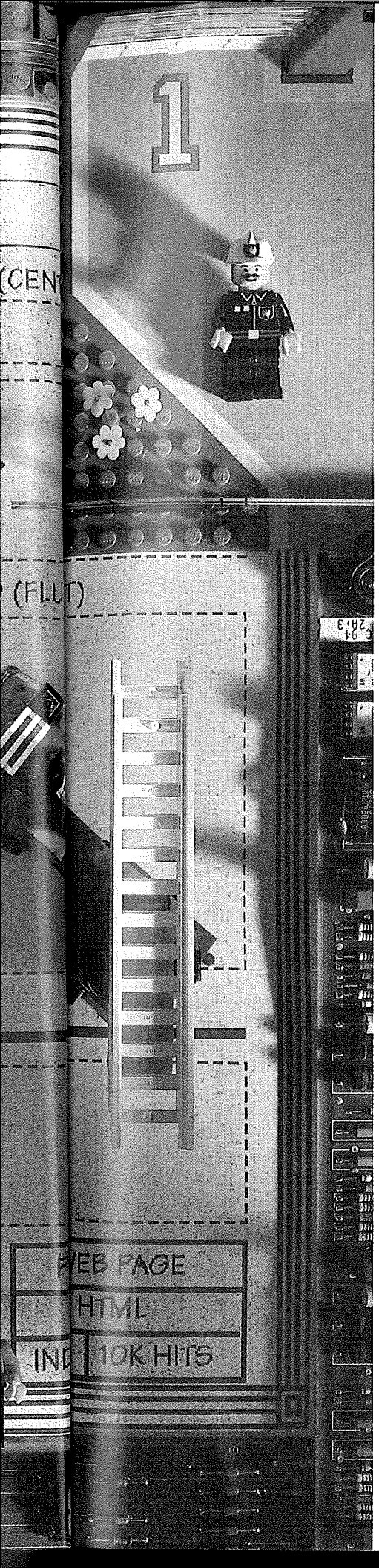
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<H1>
<H3>
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USE LEVEL 3 HEAD (FLUSH RIGHT)



HTML Helpers

A slew of authoring tools and servers is coming onto the market that make it easier to publish on the Web.

By Jeremy Carl

"If you see my grandmother publishing her own Web Page, don't be surprised." So wrote one beta tester of WebDoor, one of the many Web authoring, or "Webtop publishing," programs that have emerged in the past few months. Desktop publishing, which once revolutionized the print-publishing industry by giving everyone a cheap and easy way to produce publications, is being extended to the Internet.

While having a home page was once a luxury reserved for those who knew the Hypertext Markup Language (HTML) and had access to a server on the Web, the ability to create home pages has been granted to the masses in recent weeks, particularly as online service companies such as Prodigy and America Online have given users the access and tools needed to create Web pages. While these services have opened the page-creation market to HTML novices, even experienced HTML coders appreciate tools that simplify their work.

The new wave of commercial authoring tools vary widely in price, performance, platform, and target audience. They run the gamut from $99 programs to server packages that cost several thousand dollars and include complete Web authoring systems. The authoring tools enable people to create Web pages with images, clickable maps, forms, and other functions, without having to code in HTML, the language that describes the look and functionality of each Web page.

Although some HTML purists will happily construct Web pages using only Notepad and two fingers, the growing complexity of the HTML specification—and the Netscape extensions—make having a Web authoring tool almost a requirement. There are several freeware and shareware tools available to help you construct a page—programs like Howard Harawitz's HTML Assistant (available via FTP from **ftp.cs.dal.ca /htmlasst**), which gives Web authors buttons to insert the proper code into a document.

PHOTOGRAPH BY MARK TUCKER

HTML conversion software has been developed by word-processing program vendors to work within programs such as Word and WordPerfect.

HTML conversion software also has been developed by word-processing program vendors to work within programs such as Word for Windows and WordPerfect. Still others, like Arta Software's Web Wizard (**http://www.halcyon.com/Webwizard/welcome.htm**), walk you through the process of creating a simple Web page step by step.

But users who want to create more complex pages need more sophisticated authoring tools. This is where the commercial products that have been introduced or updated in recent months come into play.

SoftQuad's HoTMetaL was one of the first good HTML editors to hit the market, and the company's just-released HoTMetaL Pro v. 2.0 (**http://www.sq.com/products/hotmetal/hmp-org.htm**) is a $195 program that offers some advanced features, including a spelling checker, dictionary, and thesaurus. It also incorporates scriptable macros, a WYSIWYG table editor, and a feature that allows you to see how your documents will look on different Web browsers. Among many improvements, HoTMetaL 2.0 has an easier-to-use interface, quicker performance, and support for HTML 3.0 extensions.

Quarterdeck's new $79 WebAuthor for Word for Windows 6.0 (**http://www.qdeck.com/Webauthor/fact.html**) is a promising low-cost product for many users. Quarterdeck clearly isn't trying to come up with the most full-featured Web authoring tool—just one that is easy to use at a reasonable price. WebAuthor offers features you wouldn't necessarily receive in a freeware HTML editor, such as a tutorial, custom dictionary, HTML syntax corrector, forms creator, and WYSIWYG page creation.

Quarterdeck's main competition is Microsoft's own Internet Assistant for Word for Windows, which is free to WinWord owners and can be downloaded from the Web at **http://www.microsoft.com/pages/deskapps/word/ia/default.htm**). Internet Assistant converts a Word document—including headlines and graphics—to HTML, and includes a built-in browser. Quarterdeck need not throw in the towel, however. Early reviews of Internet Assistant indicate that you get what you pay for. Nonetheless, it could be a valuable add-on for some Word customers, and it's free.

Novell has made a free beta version of its Internet Publisher available on its Web site (**http://wp.novell.com/elecpub/intpub.htm**). Like Microsoft's Internet Assistant, Novell's offering lets users create Web pages from WordPerfect documents. Novell eventually plans to integrate Internet Publisher into future versions of WordPerfect.

Novell also offers WordPerfect 6.1 SGML Edition for more advanced users. This program helps users publish documents in SGML (Standard Generalized Markup Language), of which HTML is a subset. An international standard for publishing since 1986, SGML has been adopted as a standard by several major industries and the U.S. government. However, it is considerably more unwieldy than HTML, which has been a main reason for the Web population's reluctance to adopt it as a standard. WordPerfect SGML Edition, however, represents one of several new SGML tools on the Web, reflecting many Web developers' desire for the greater power that SGML can provide.

One promising new entry for home users is the Coriolis Groups's All-in-One Web Surfing and Publishing Kit (**http://www3.primenet.com/coriolis**), which was released in June. The $79.99 package comes with several tools, including Home Page Creator (a point-and-click tool with ready-made Web-page templates), Web Spinner (an HTML editor), NetSeeker (which provides up-to-the-minute updates on browsers and the best new Web publishing tools), and an instruction book of tips called "Web Publishing from the Experts."

On the Macintosh side is WebDoor, which allows users with little or no knowledge of HTML to create and maintain a page on the Web, with prices starting at $20 a month. While WebDoor provides an authoring program (accessible at **http://www.opendoor.com/webdoor**), it also requires users to maintain their pages on WebDoor's site. There is a $.10-per-minute charge to make changes to your pages, a $5 charge for every 10,000 hits you receive, and additional charges for storage above 512K.

Although many people are only interested in creating simple Web pages, others want to create complex sites with many linked pages. To that end, more powerful Web publishing tools have been designed.

One is Interleaf's Cyberleaf (**http://www.ileaf.com**), which the company bills as a "Web production environment" rather than a mere authoring tool. The $795 program, which is available for Digital Alpha AXP, HP 700/800, IBM RS/6000, and Sun Sparcstation computers, works with most word processors and desktop publishing systems. It allows you to convert your documents into their HTML equivalents. But Cyberleaf does more. It allows you to create a set of linked documents on the Web, then lets you edit the site. It updates URLs automatically and incorporates many other advanced capabilities, including the use of "intelligent mapping" that matches the style of a document in another environment with its HTML equivalent.

IT Solutions' WebPages is another powerful HTML editor and authoring tool for Windows and Unix machines. Priced at $495, WebPages (**http://www.pages.com**) is a WYSIWYG HTML editor that runs on NextStep/OpenStep platforms, with versions for Sun and Hewlett-Packard machines in the works.

Like many advanced Web authoring tools, WebPages takes advantage of drag-and-drop capabilities and allows you to see the end result of the pages being created. Without having to type in a URL or even know it, you can establish hyperlinks to documents by dragging and dropping links from NextStep browsers.

W3.COM's W3Toolbox is a set of Web site development tools designed to generate Web pages from a flat-file database. The program lets you add search capabilities and incorporate online forms, and includes three separate utilities—WebSpin, WebScan, and WebForm—which are priced at $495 for the set.

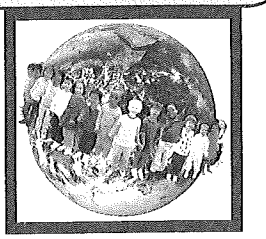
WebSpin lets you create and mark up a simple Web page by using a flat-file

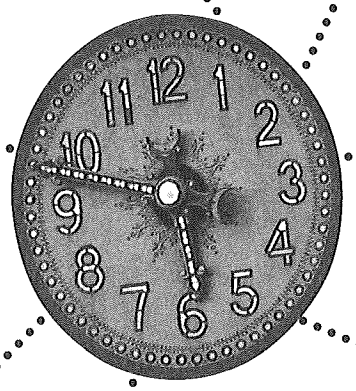
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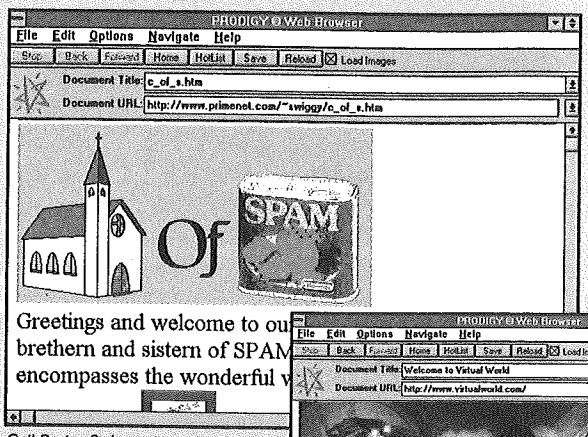
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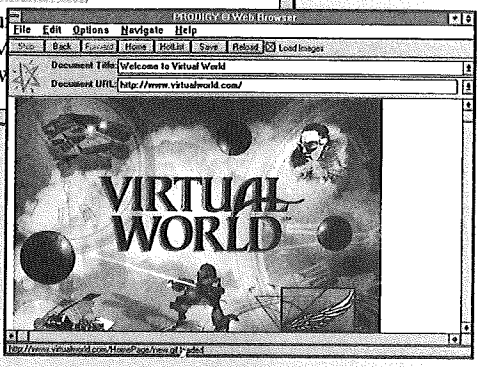
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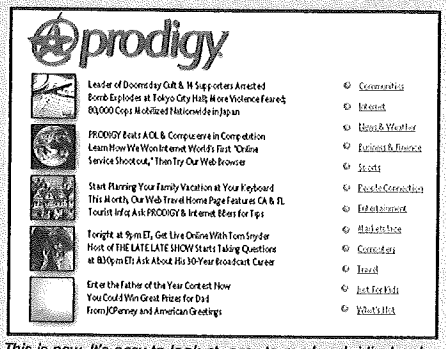
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database and templates. It is designed for organizations that want to make a large document collection available via HTML. WebScan is a search tool that allows visitors to a site to search any combination of fields, and it returns a list of matching records. WebForm allows users to receive e-mail and HTML responses to the online forms they fill out. Beta versions of the tools are available for downloading at W3.COM's site at **http://w3.com**.

At the most advanced, and expensive, end of the market is Lotus Development Corp.'s InterNotes Web Publisher (**http://www.lotus.com**), a specialized product that lets users turn documents from the popular Lotus Notes workgroup format into HTML pages. Documents revised in Notes are automatically revised at the Web site as well, which is a huge advantage in that it removes much of the expense that is typically associated with maintaining a Web site. InterNotes Web Publisher supports much of HTML 3.0 and will be available in a Windows NT version at an estimated price of $6,589.

Other authoring tools coming to market include a program from Cambridge, Mass.-based Vermeer Technologies. Its program, code-named "Pavillion," is expected to debut sometime in the latter half of this year for Windows (NT, 95, and 3.1) and Macintosh systems. Among the luxury features to be packed into Vermeer's graphical HTML editor will be a graphics converter, forms creator, automatic HTML tags updater, built-in e-mail and search engines, and the ability for remote users to edit pages. Pricing will be less than $1,000, according to Vermeer.

After acquiring Frame Technology, Adobe announced that it would field a Web publishing solution that will run on Sun and SGI machines. The program will incorporate Adobe's Portable Document Format (see "Adobe Casts Its PDF Net," pg. 70) into a Frame publishing program that will include document management, image processing, and illustration capabilities.

There are a dizzying array of tools available for aspiring Web authors, and many more to come. With such a wide variety of choices, you could end up spending more time choosing your authoring tool than in putting up Web pages.

SERVERS

Most organizations—if they can afford the hardware and connection costs—prefer to have their Web server on site. To host a site, you need more software than just a Web-page creator; you need a Web-server package as well.

There are many packages available (more than 30 at last count), ranging from freeware like Gus Estrella's Windows-based SerWeb to Netscape Communications Corp.'s Netsite, and other programs offering secure transactions and sophisticated statistics and administration features. Many server packages also include Web authoring tools. Servers are available for the major platforms, including Unix, Windows, OS/2, and Macintosh computers.



Illustration by David Goldin

No discussion of the Web server and authoring market would be complete without mentioning Netscape Communications (**http://home.netscape.com**) which is threatening to become the 300-pound gorilla of the Internet. In addition to the popular Navigator browser, Netscape sells its Netsite Communications Server, a $1,499 package that provides a basic Web presence. For more security-conscious users, Netscape offers a $5,000 secure Netsite Commerce Server, which uses public key encryption technology for transactions such as credit-card purchases.

Netscape offers a variety of niche market solutions, including a Publishing Server aimed at high-volume publishing sites. It also plans to introduce a low-cost personal publishing system. Netsite servers are being bundled with other vendors' platforms, including offerings from Silicon Graphics, Sun, and Tandem.

A longtime heavyweight in the field, Silicon Graphics (**http://www.sgi.com**) has pioneered much of the most exciting technology now available for Web developers. The Silicon Graphics WebForce multimedia servers range in price from $10,995 to $45,200. The WebForce authoring system has some of the more cutting-edge features, including VRML (Virtual Reality Markup Language) support and the WebSpace Browser, which takes advantage of VRML and allows you to surf the Net in 3D.

Open Market's $1,495 WebServer (**http://www.openmarket.com**), like Netscape's line, is targeted for commercial applications and offers transaction logging and other back-room administrative modules. Available for most Unix platforms, the company says it is capable of supporting more than 1,200 concurrent connections to a site, a significant margin over most of its competition. WebServer, according to Open Market, incorporates several performance enhancements over many earlier servers and, based on Webstone benchmark tests, the company claims WebServer achieves higher performance under heavy loads. A secure version of the server supports S-HTTP and sells for $4,995 plus mandatory $1,995-per-year support.

CompuServe Seattle (formerly Spry Inc.; **http://www.spry.com**), makers of Internet in a Box and the Air series of Internet tools, has made a beta version of its Internet Office Server available for



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testing. It is expected to hit the retail market soon at $2,995. CSS's server includes a search engine and HTML authoring tool with a built-in editor. A unique feature of the CSS server is the per-page security it offers, meaning you can choose which pages to secure and which to leave unsecured, which saves network bandwidth and processor power.

IBM (**http://www.ibm.com**) isn't planning to be left out of the growing server market. Its specialized Electronic Publishing Edition for OS/2 is a $1,400 Web server that allows users to build electronic books and make them available to users on a variety of platforms. It includes BookManager Build/2 Version 2.0, a tool for building books from copy on most major word processors. Also included is BookManager BookServer for World-Wide Web for OS/2, designed to serve books on the Web. It also includes indexing utilities, foreign language dictionaries, and a utility for building books from SGML documents. IBM also plans to introduce WebConnection for OS/400—Web servers for its AS/400 minicomputer line that will include secure transaction processing and support for CGI scripts (see News).

Folio Corp.'s InfoBase Web Server is another recent release, having first shipped in the beginning of July. Among other features, it allows users to make their information accessible for distribution on the Web, CD-ROM, or on an in-house network without alteration. Folio provides a built-in security firewall, dynamic updating of documents, and access from any platform. The server keeps an extensive log file of who is accessing it and allows selective access to various documents.

Another new entry to the market, O'Reilly & Associates' WebSite (**http://gnn.com/gnn/bus/ora/news/c.website.html**), could be a big player. It turns Windows NT and Windows 95 computers into full-featured servers with capabilities similar to machines running Unix, and is set to ship at an aggressive $499. WebSite comes with some impressive features that you might expect only in the pricier competition, including WebView, which displays all of a Web site's links in a tree-like fashion, even telling the viewer which ones are broken. WebSite also includes "wizards," which can automatically create certain types of simple HTML documents, and some security features (although sites requiring serious security will be better off at the high end of this market).

On the user side, WebSite supports authentication, which gives different users varying degrees of access to a site, as well as the ability to search a site by keyword. WebSite also allows users to run programs such as Excel or Visual Basic over the Web.

O'Reilly executives feel their main competition in the mid-priced server market will come from Process Software's Purveyor, a server solution for Windows NT and Windows 95. Purveyor has a graphical interface, basic authentication features, and provides sample forms for quick Web-page creation. Purveyor also offers logs transactions, including such information as time, date, HTML page, and the IP address of the requester. It is available for $1,995, with an additional $295 to $1,295 for support services.

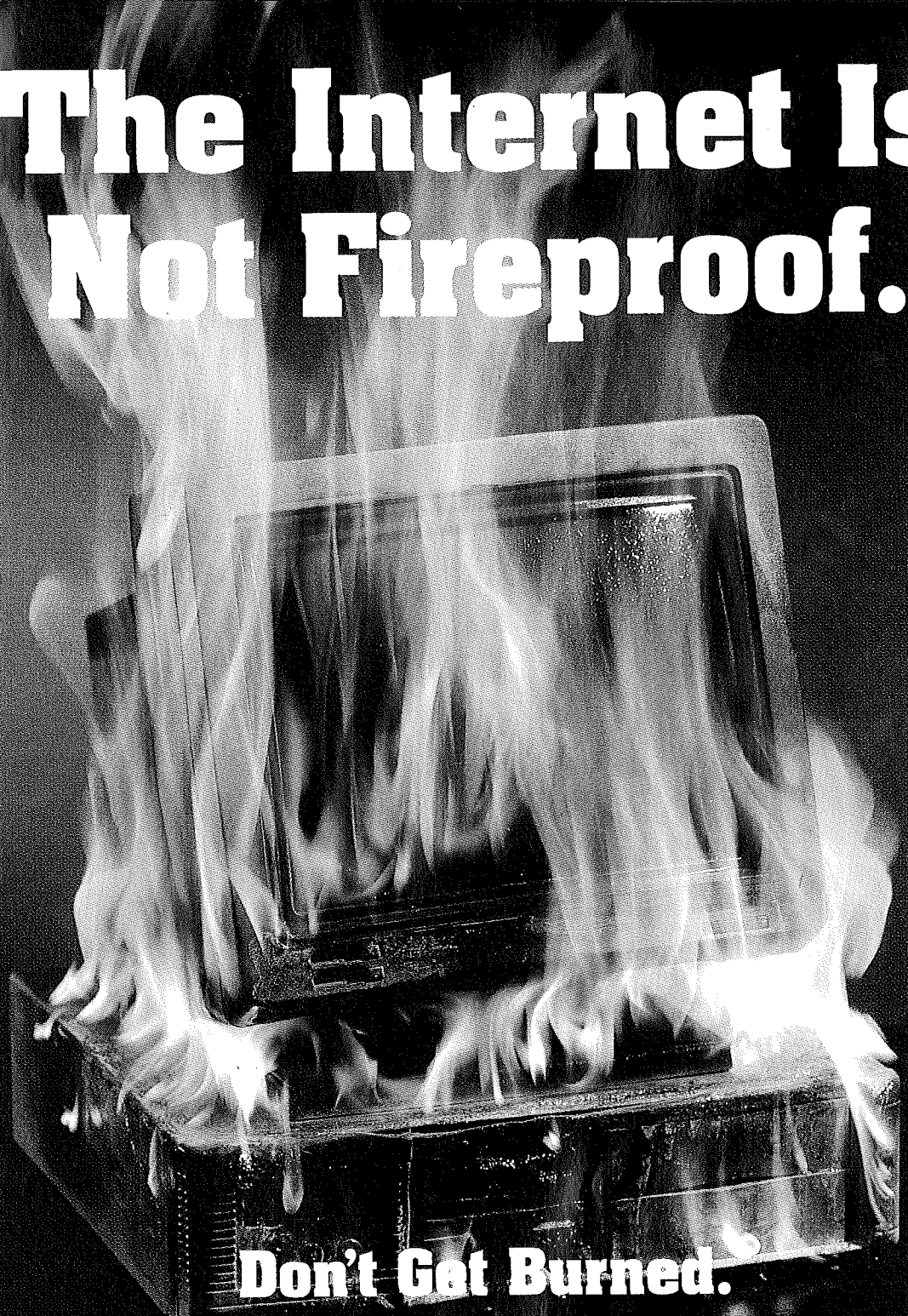
On the Macintosh side is Apple's own Internet Server Solution, which can be ordered in a variety of configurations, priced from $2,909 to $8,209. It comes bundled with several software packages, including the Web-Star 1.0 server, which supports AppleScript and offers customizable Web-Page templates. Also included are the BBEdit HTML editor, CGI scripts, Netscape client software, AppleSearch 1.5 indexing software, and Adobe's Acrobat Pro.

At the high end of the Web server market is Information Dimensions's Basis Webserver, which is designed for publishing large-scale document collections (**http://www.idi.ocdc.org**). The server automatically converts existing documents into HTML format, and allows administrators to manually embed anchors in the text. Because the Basis Webserver is based on the company's BasisPlus database, the company claims that navigation and indexing of hundreds of gigabytes of data can be performed quickly. Available for a variety of Unix platforms, pricing starts at $15,000.

As the World-Wide Web continues its phenomenal growth, The question is no longer whether to get online, rather which software to use. ■

Jeremy Carl (jcarl@webweek.com) is assistant editor of Web Week.

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A guide to freeware and shareware HTML resources

AUTHORING TOOLS

Windows

HotDog Web Editor
http://www.sausage.com

HoTMetaL, HoTMetaL Pro
Via FTP from ftp.ncsa.uiuc.edu **in the** /Mosaic/Contrib/SoftQuad/hotmetal **directory.**

HTML Assistant
http://www.sq.com/hmpro.html

HTMLed, HTMLed Pro
http://www.ist.ca/~peterc/

HTML Writer
http://lal.cs.byu.edu/people/nosack/

Internet Assistant for Word for Windows
Via FTP from ftp.microsoft.com **in the** /deskapps/word/winword-public/ia **directory.**

Macintosh

HTML Editor
http://dragon.acadiau.ca/~giles/HTML_Editor/Documentation.html

BBEditLite
Via FTP from ftp.std.com **in the** /pub/bbedit/freeware **directory; the file is** bbedit-lite-30.hqx.

SHE—Simple HTML Editor
Via FTP from ftp.lib.ncsu.edu **in the** /pub/software/mac **directory as** simple-htmleditor.hqx.

Web Weaver
http://137.143.111.3/web.weaver/about.html

WEB SERVERS

Windows

CERN httpd
http://www.w3.org/hypertext/WWW/Daemon/Status.html **(also Unix version).**

NCSA httpd
http://hoohoo.ncsa.uiuc.edu/docs/Overview.html

HTTP Server for Windows NT
http://emwac.ed.ac.uk/html/internet_toolchest/https/CONTENTS.HTM

Macintosh

MacHTTP
http://www.biap.com/machttp_info.html

OS/2

OS2HTTPD
ftp://ftp.netcom.com/pub/kf/kfan/overview.html

UNIX

GoServe
http://www2.hursley.ibm.com/goserve/

GN—A Gopher/HTTP Server
http://hopf.math.nwu.edu:70/

pHTTPd
http://eewww.eng.ohiostate.edu/~pereira/software/phttpd

WN
http://hopf.math.nwu.edu/

HTML GUIDES

Large Collections:
http://union.ncsa.uiuc.edu/HyperNews/get/www/html/guides.html
http://www.cs.buffalo.edu/pub/WWW/other/html.html
http://www.charm.net/~web/Vlib/

NCSA'S HTML Quick Reference
http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLQuickRef.html

NCSA's HTML Primer
http://www.ncsa.uiuc.edu/demoweb/html-primer.html

Netscape's Selected HTML Authoring Documents
http://home.netscape.com/assist/net_sites/index.html

Tim Berners-Lee's Style Guide for Online Hypertext
http://www.w3.org/hypertext/WWW/Provider/Style/Overview.html

The Bare Bones Guide to HTML
http://www.access.digex.net/~werbach/barebone.html

WEB STYLE GUIDES

HTML Style Guide & Test Suite
http://www.charm.net/~lejeune/styles.html

Set It Up Ergonomically!
http://www.best.com/~dsiegel/vestibule/set_netscape.html

Style Your Sheet!
http://www.links.net/webpub/style.html

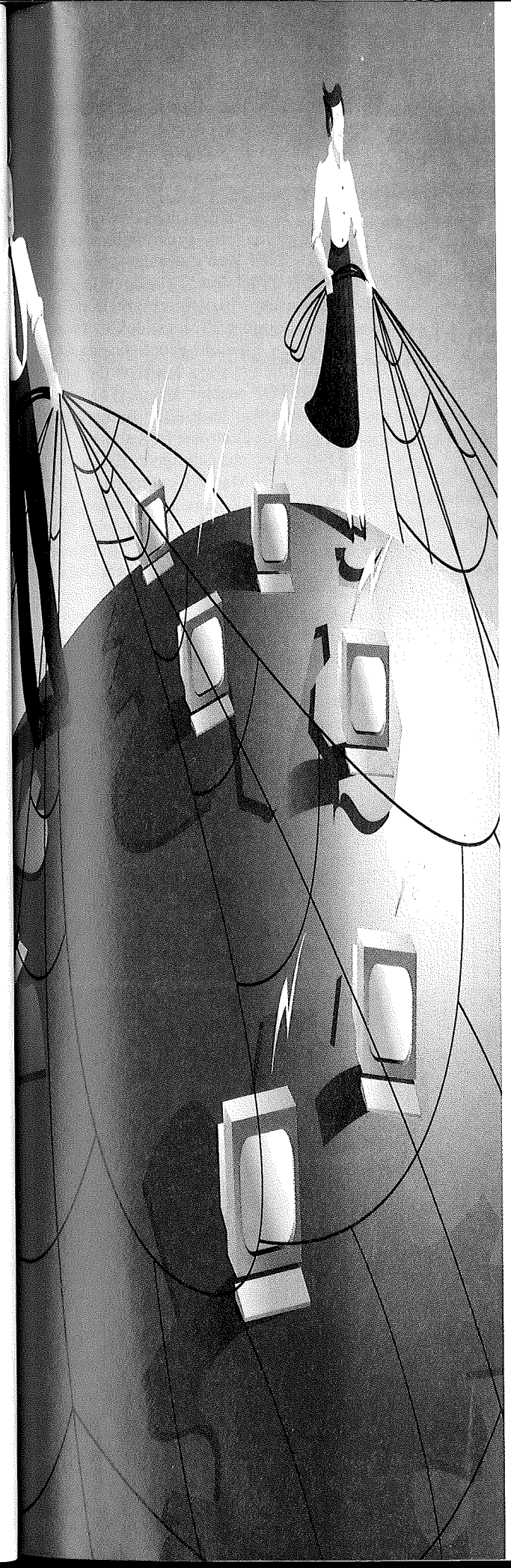
Top Ten Ways to Tell if You Have a Sucky Home Page
http://www.winternet.com/~jmg/topten.html

Web Wonk Tips for Writers and Designers
http://www.best.com/~dsiegel/tips/tips_home.html

OTHER INFORMATION

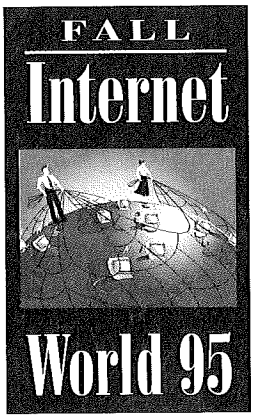
Resources from Yahoo
http://www.yahoo.com/Computers/World_Wide_Web/HTML/

The HTML Authoring Mailing List
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Adobe Casts Its PDF Net

Acrobat's dexterous publishing feats are winning applause from users across the Internet.

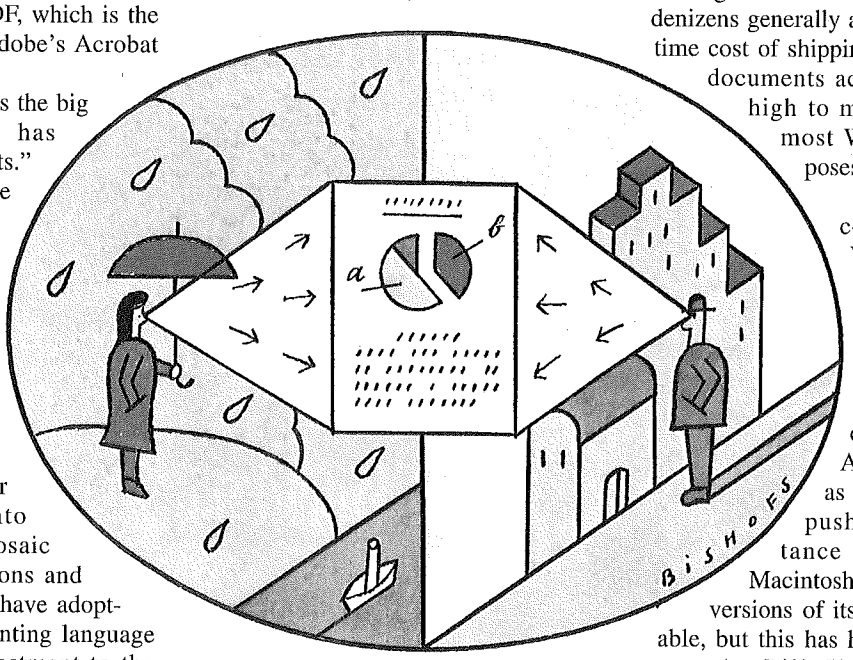
By Steven J. Vaughan-Nichols
and Rachel Schmutter

For most of the Web's brief life, almost all of its documents have been written in Hypertext Markup Language (HTML). All things change. Today, Adobe's Portable Document Format (PDF) is becoming part of the warp and woof of the Web. By tomorrow, even casual Web explorers will find that they need to deal with PDF, which is the technology underlying Adobe's Acrobat program.

You may ask, "What's the big news here? The Web has always been full of formats." Yes, it has; but unlike SGML or TeX, PDF is swiftly becoming a rival to HTML, the Web's main language. Adobe has taken a minority share in Netscape Communications Corp. and its Acrobat viewer is being incorporated into Netscape's Navigator browser, as well as into Spyglass's Enhanced Mosaic browser. Many corporations and government agencies that have adopted Adobe's PostScript printing language want to extend their investment to the Internet, and publishers are keen on PDF because it provides more precise document description and enables documents to retain their look and feel across different platforms.

Like HTML, PDF is a hypermedia language that can link to other parts of the same documents or to remote documents. Unlike HTML, PDF is a proprietary format. HTML is free; and its fate is in the hands of an Internet Engineering Task Force (IETF) and the World-Wide Web Consortium (W3C). While Adobe has made PDF freely available, PDF is Adobe's property.

PDF challenges HTML on the home pages of the Web for one vital reason: PDF gives its author precise and absolute control of what the reader sees. With HTML, a Web author can only create works that approximate what you'll actually see on your display. Even aside from non-standard HTML additions like Netscape's, with HTML you see the author's creation the way your viewer wants you to. The Cello browser, for example, by default presents links as text enclosed in boxes, whereas most browsers display them as underlined colored text. The author has no control over HTML text's color and only limited direction over its font and point-size. PDF, on the other hand, enables authors to create works that will look precisely the same to all users—within the limits of their hardware capacities—regardless of the browser.



This is no small matter. Bruce Page, president of Magnetic Press, publisher of the PDF-based Web journal, *Acropolis*, vigorously proclaims, "The inability to describe exact visual representations is heresy to designers. Things look the way they look for a reason! People respond to things in different ways based on the way they look. PDF enables designers to keep control over that look. PDF is the only sane choice for electronic publishing."

Bill Skeet, chief designer of Knight-Ridder's New Media Center, has built prototypes of 100-plus-page interactive PDF newspapers and is happy with the format. It gives him, he said, "complete control over the look and feel of the document, and it is very easy to navigate."

Of course, PostScript always gave authors this power. But it was at the cost of huge files. For some technical documents, authors and readers have been willing to make this compromise. Web denizens generally agree, though, that the time cost of shipping massive PostScript documents across the Web is too high to make it practical for most Web-publishing purposes.

So why hasn't PDF conquered the World-Wide Web? Until recently, it has been a simple matter of lack of support. To read PDF documents, you need a copy of Adobe Acrobat Reader set up as a viewer. Adobe has pushed for PDF acceptance by making DOS, Macintosh, Windows, and Unix versions of its Reader freely available, but this has had only limited success. As Bill Skeet observes, "No browsers (directly) support PDF yet. That's in the future."

The future is now. Spyglass and Netscape, the two leading browser vendors, have put their support behind PDF. Spyglass's Enhanced Mosaic 2.0 comes with a software development interface (SDI) that helps it interact with other programs more effectively. SDI automatically configures the external programs to work with Enhanced Mosaic avoiding the

Illustration by Maris Bishofs

MIME type/viewer application routine.

The first of these SDI-enabled applications is Adobe Acrobat, which works with PDF, and SoftQuad Panorama for SGML.

Netscape has far more dramatic plans for PDF. Adobe and Netscape are intent on making PDF an integral part of the Netscape product line. This will be a gradual process. The first thing you'll see is a version of Navigator that will support Weblink, a program that Acrobat Exchange authors can use to add HTML links to their PDF documents. The software can also be used to launch Netscape or Enhanced Mosaic from within Exchange to read HTML documents. Want to know more? Visit **http://www.adobe.com/Acrobat/Weblink.html**.

A PDF Primer

Want to see what all the excitement is about? The first thing you'll need to do is to get an appropriate version of the Adobe Acrobat Reader. These are available at many sites; but you can always count on getting one from Adobe at http://www.adobe.com/Software.html#acrordr. **You must then install it as a viewer for your browser. Installing the Reader is a simple task. With Netscape, choose Preferences from the Options menu, then—under Helper Apps—enter "PDF" as an extension, select "Launch Application," and enter the path and filename of the Reader (i.e.,** c:\acrobat\acroread.exe). **With Mosaic, choose "Viewers" then "Add New Type" from the Options menu, then add the PDF extension. Other browsers are similar. From then on, whenever you click on a PDF document, Acrobat will launch.**

For precise instructions on how to install Acrobat for many popular browsers, travel to http://www.adobe.com/Acrobat/AcrobatWWW.html.

Ready to go? Here are some of the best places to find top-quality PDF publications:

Acrobatics—The Journal for Acrobat Users
http://www.ep.cs.nott.ac.uk/~dre/merlin/acrobatics.html

***Acropolis*, the magazine of Acrobat publishing**
http://www.acropolis.com/acropolis

***Axcess* Magazine**
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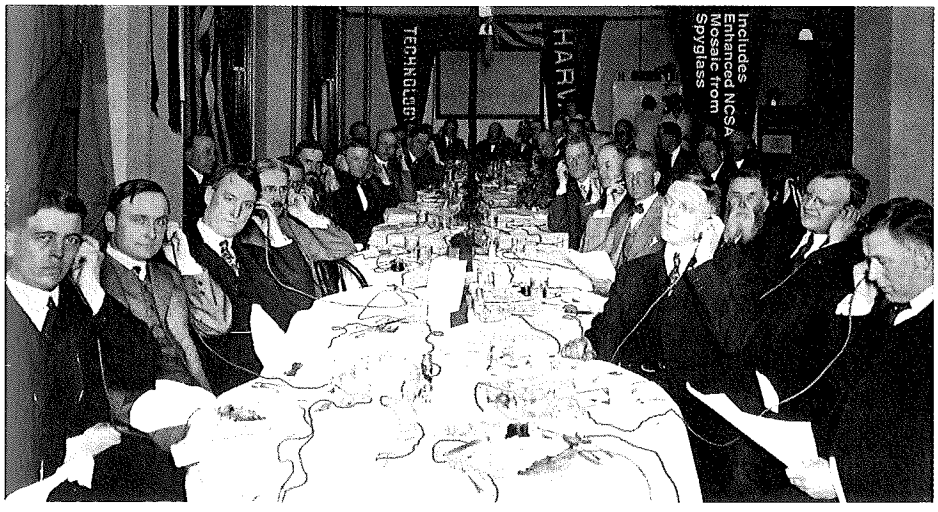
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Netscape is currently working on the next version of Netscape Navigator. The new, improved Navigator will include a built-in PDF viewer. The day this happens is the day that PDF—and Adobe—become a major force in Web publishing. Skeet is enthusiastic about the project. He believes that the newspaper industry will embrace the marriage of PDF and Netscape Navigator wholeheartedly.

After the PDF-enabled Navigator appears, Netscape and Adobe will debut a Netscape server that will provide superior PDF performance by caching frequently requested PDF documents and by making documents "browsable."

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CIRCLE NUMBER 83

Adobe also is creating reader-level programming libraries. These will be bundled with the Acrobat software developer's kit (SDK). With the SDK, any browser programmer can integrate PDF into a browser. With Adobe forgoing a per-copy royalty for these libraries, it won't be long before all major browsers include integral PDF readers.

During the honeymoon of PDF and the Web, it's easy to overlook potential problems. For example, some Web weavers feel very strongly that the Web's primary language should be free and open—in short, HTML— rather than the proprietary PDF.

Skeet said he understood the resistance to PDF. "HTML's biggest advantage is accessibility. It is the current broad standard; it's not going to go away overnight." Skeet also noted that you don't need desktop publishing-level tools for HTML publishing. For publishers who do not require intricate graphics, it makes sense to stick with what they know. In any case, as Skeet observed, "Some browser producers may not want their browsers to be PDF-compatible."

Some authors are concerned about Adobe gaining a choke hold on the Web as a result of its control of PDF. For example, you currently must have Adobe Exchange to generate PDF documents, although other authoring tools eventually will show up. Adobe, which acquired Aldus last year, has incorporated PDF into Aldus's FreeHand as a graphics exchange format. Adobe recently bought Frame Technology and announced that a PDF-based publishing program would be forthcoming. But for the time being, Adobe's Exchange is the only choice.

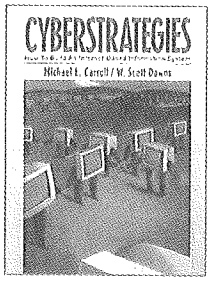
Furthermore, Adobe Acrobat Pro, the master PDF creation program, costs $595. That's a hefty price of admission to Web publishing, especially when HTML allows you to get in for free. The network version, Acrobat for Workgroups, costs $1,595 for a 10-user license. While this is considerably more affordable for organizations, it's still a hit in the wallet.

PDF does not have the field to itself. Novell is pushing Envoy, a page description language and viewer created by Tumbleweed Technologies, which the two companies are jointly marketing. Sun's new Java programming language and HotJava browser technology, and Silicon Graphic's new three-dimensional graphics environment also are vying for attention. Netscape has also agreed to bundle Macromedia's multimedia viewer in its browser. There is concern that browsers will become bloated by incorporating the viewers for all these various formats.

PDF currently has the most momentum as a contender to HTML. Will PDF drive HTML off of the Web? "I don't see PDF killing HTML," Skeet said, adding that each language has its place on the Web of the future. Skeet is probably right. While PDF gives designers the artistic control they want, almost anyone can be a Web publisher with good, old-fashioned HTML. From where we sit, the Web is big enough for both of them. ■

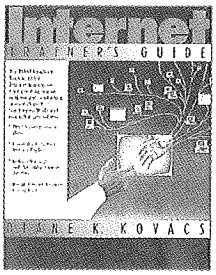
Steven J. Vaughan-Nichols (sjvn@access.digex.net) is a freelance writer who specializes in the Internet and online services. Rachel Schmutter is a writer with Vaughan-Nichols & Associates.

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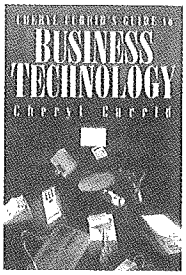
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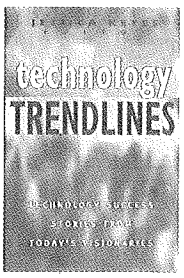
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Jessica Keyes

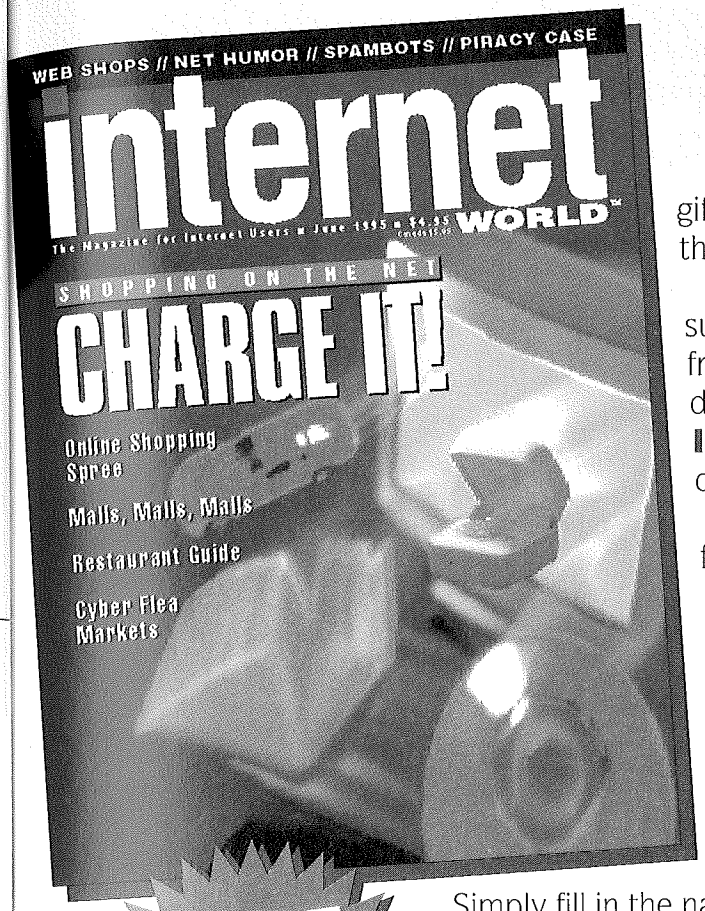
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CIRCLE NUMBER 50

Wide Area View

An interview with WAIS, Inc. CEO Brewster Kahle. By Jeff Ubois

Brewster Kahle is founder and CEO of WAIS, Inc., the San Francisco-based developer of Wide Area Information Server (WAIS) database search software. Founded in July 1992, WAIS employs more than 40 people. The company was recently acquired by America Online (AOL) for $15 million. Kahle, who in the mid-1980s was the architect of the CPU of the Thinking Machines Connection Machine Model 2, said his company's goal was to create tools that help people become publishers on the Internet.

While WAIS's primary products are free and commercial versions of its software, the company's publication services are growing rapidly and now account for about one-half of its business.

As part of AOL's flotilla of Internet software companies, WAIS is positioned between consumer online services and the traditional Internet culture from which it evolved—a potentially prime place to catalyze the emerging electronic publishing market.

The company's Web page is at **http://www.wais.com**, and the newsgroup **comp.infosystems.wais** offers helpful information for putting up WAIS servers.

IW: *What is WAIS, the software?*

KAHLE: WAIS is an Internet tool for searching for information. Right now the Internet is getting a lot of attention because it's not just a vaster wasteland; it offers the opportunity to participate. It's not just about getting information, but about being able to make your words known. So I think of the Internet as publishing, and the focus we have is on helping people say what they want and finding others that have similar interests.

We like to use this analogy: A book has three sections—the table of contents, the pages, and the index. So think of the Internet as a book: There is Gopher, which is the table of contents; there is the World-Wide Web, which is the hypertext pages; and there is WAIS, which is a directed search when you know what you want. WAIS is for the user who knows what he or she wants, not for the explorers or the tourists so much as for the people who want their answers. The index is what lets the reader take control.

IW: *How is WAIS different from traditional search engines?*

KAHLE: We provide for a user-friendly environment by accepting natural language questions, but we also provide for the trained searchers that know how to use Boolean logic and fielded searches. We see the amount of information on the Net growing phenomenally, so having assistance in finding things appropriate for you is crucial. We use a technique called relevance feedback, which is having the machine understand what you liked and didn't and using that data to find more documents. You say, "I like that one, find me more like that one." The machine looks at how you used various documents—what you read all the way through, what not, and what you cut and pasted and forwarded to friends.

IW: *Who's buying your products and services?*

KAHLE: Our main markets are government, which has a mandate to make information available for free; publishers, which have the traditional role of understanding how

PHOTOGRAPH BY STEVE HATHAWAY

I keep all the mail I have sent or received. I index it every night and search back on that. It is the thing I use WAIS for most.

to distribute information for money; libraries; and distributed corporations—they are growing more and more global all the time and just staying in touch with themselves and finding resources in themselves becomes more and more difficult. Customers include the Library of Congress, Encyclopedia Britannica, Scholastic, Dow Jones, the Defense Technical Information Center, Perot Systems, and the intelligence community.

IW: *How many WAIS databases are out there now, and how many people are using them?*

KAHLE: We don't know. There are thousands of databases, and most users have used WAIS but probably don't know it.

IW: *Would you expand on the relevance feedback and natural language ideas?*

KAHLE: As databases are starting to be used by more and more people, many of them are not trained in Boolean logic, and when we look at the searches they do, they often use only one or two words. Trying to find the right document out of 100,000 documents based on one or two words is extremely difficult.

Anything we can do to help people tell us what it is they are looking for helps. From a list of documents, you can click what you like and it uses relevance feedback for you.

There are lots of other things that are being built around WAIS—not the core technology, but tools that let you hook multiple databases together. Companies like PLS (**http://www.pls.com**) are developing mechanisms for aggregating multiple databases, and Z39.50 [a library catalog access protocol] continues to spread.

All the companies are starting to see that the threat is not each other, but trying to make a system on the whole good enough that the Internet will hold enough value to keep proprietary systems at bay.

IW: *How do the search tools relate to the size of the database? If you've got 100 records, you don't care as much about the search tool as when you have 30 gigabytes.*

KAHLE: Absolutely. But it is key to have one interface that can address large numbers of databases. And not just external databases: Your own personal e-mail and your corporate files as well as wide-area information should be accessible from one point-and-click interface.

Most people find their own information to be the most important, their group's information somewhat less important, and wide-area information even less. But the amount of information available goes the other way. So the tools have to get more and more sophisticated the further away you get from people. Finding what you want among terabytes of data requires serious tools.

IW: *How can people use WAIS for personal data?*

KAHLE: I keep all the mail I have ever sent or received. It's about 500 megabytes. I index it every night to keep it up to date, and I use it as my memory. When I am trying to remember a name, I will send myself e-mail and I can search back on that. It is the thing I use WAIS for most. It is common to save all the messages you have ever sent and ever received, and you will start to save all the documents you have ever read from different sources.

IW: *What do you see as the most interesting emerging publishing technologies? Agents?*

KAHLE: A lot of our sophisticated customers are asking what comes next, what is after the Web. Everyone is getting increasing usage, but they are asking their professional friends and finding that people are not going back to their sites over and over again. So how do you raise the value so that people return to your site?

We are working with different technologies to deliver these types of capabilities. The simplest is personal pages, where you do a search and save and the next time you come online it has the page. That is personalization, but it doesn't have the other two aspects of an agent—aggregation and packaged delivery.

Aggregation is in its infancy right now, and packaged delivery is also still pretty wimpy. We've got e-mail delivery, like Newshound [on AOL]; we have fax delivery, like First! (a service of Individual Inc; see below), and we are starting to get more custom applications like Ensemble's personal newspaper or Pointcast, where it is a little more layout oriented, oriented towards online browsing. We are working with Ensemble (**http://www.ensemble.com**) and building two different publishing systems using that technology.

IW: *What is Ensemble?*

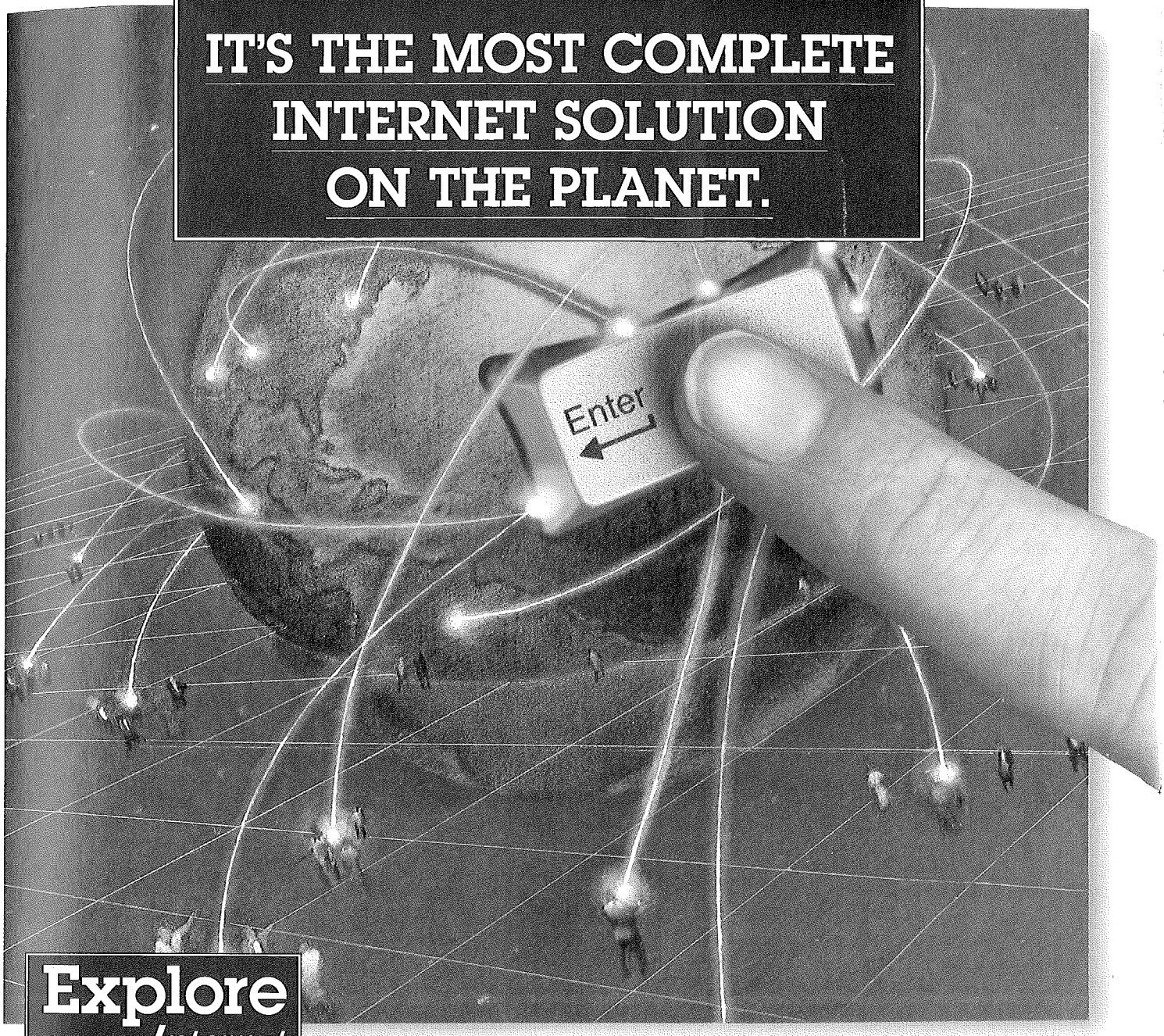
KAHLE: Ensemble is a small development company that has been working on personal digital newspapers. They were distributing a *Wall Street Journal* for free on the Internet until recently. Dow turned them off because they were getting too popular. The technology is a digital newspaper that might have the same content for everybody—whether a *Wall Street Journal* or a *New York Times*—or it can be personalized. I personalize it to watch for certain companies, categories, and industries, and I receive it via e-mail.

IW: *I've been disappointed with clipping services. They give you too much garbage, or miss important stories, or filter out randomness. Is that getting better?*

KAHLE: No, not yet. But profiling what a user wants is difficult. If you ask them what they are interested in, often it is not an accurate assessment of what it is they will actually read if you hand it to them. We have not gotten much beyond having you fill out a form and sending documents based on those words, phrases, categories, and keywords. Right now there are two systems to get beyond that: One is human intervention, which is expensive but good, like Individual Inc. (**http://www.individual.com**), and the other is deduction based on people's interests.

The best work is taking place at MIT. The Homer/Ringo music rating system (**http://jeeves.media.mit.edu/ringo**) and the video ranking system at Bellcore (**videos@bellcore.com**) are good examples. Bellcore's system asks you to rank videos you like and it will recommend other videos based on the rankings of other people who are similar to you. These systems

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CIRCLE NUMBER 31

Whether pricing will be à la carte, fixed fee, or per document is anyone's guess. Smart people are playing it a few different ways.

have extremely high predictive value.

So, aggregation is getting fixed by open protocols being adopted by a growing number of players, and personalization is getting better. Currently these are the bottlenecks.

For packaged delivery, we are getting some imaginative work in Silicon Valley to produce packaged applications for vertical markets. If you are a stock broker, for example, you would want graphs and reports and numbers; and if you are a CEO, you would be looking for press releases and articles about competitors, and you may want it to be packaged in a different way.

IW: *For a while it seemed like Gopher, WAIS, and the Web were all being discussed as tools everyone would use, but as forms-based Web pages become more common, do you see WAIS retreating into the woodwork?*

KAHLE: If we are successful, no one will know they are using WAIS. We are part of the plumbing, and work back upstream as a server technology. We try to be agnostic about information delivery systems. The Web is certainly the dominant delivery system now, but we see possibilities in the 3D environments, the Microsoft Network, personal digital newspapers—all sorts of different delivery technologies. All we are interested in is being on the back end, and the only time you notice the plumbing is when it backs up. So our goal is to be out of sight and working.

IW: *Are there any innovations in the copyright field you are watching, or that you think are interesting and relevant to publishers?*

KAHLE: It's funny, we don't end up in a lot of the same conversations we did ten years ago. Ten years ago publishers were very scared of having an article taken and sent around to all your pals. This doesn't seem to be high on their worry lists now.

IW: *I'm surprised to hear you say that. ClariNet lost Dave Barry because people were forwarding the articles around.*

KAHLE: Dow and CMP and others would care if the information were hoarded and resold. Dave Barry may have been an issue because there were Dave Barry lists where the articles were delivered to thousands and thousands of people. If it's just somebody taking a cool article from *Internet World* and sending it to their buddy, this doesn't seem to make publishers see red. If people republish it, then, heck, come down on them.

It is a matter of scale. The publishers we work with most actively are daily, weekly, and monthly publishers, and their value is in timeliness, completeness, and quality. Timeliness and completeness aren't served by someone sending around an article. They actually are interested in accumulating more users and will offer articles for free in the hope that people will subscribe to the system.

IW: *How do you see chargeback mechanisms evolving and how central is that to what you want to do?*

KAHLE: There are several competing systems—CyberCash, DigiCash, and others—and we see those as extremely exciting. We haven't worked with them yet, but we look forward to doing so in the future. Whether it will be *à la carte* pricing, fixed fee, or per document is anyone's guess, and the smart people are playing it a few different ways.

Right now, the simplest fee structure is subscription-based. So you can pay for a month of access, maybe a site license, and it's all you can eat, like ClariNet. It is an effective pricing model because people don't quite know what the value of the information is; they don't know how much they'd use it. What we are oriented towards is not even setting up shops so we make money. We are setting up shops so that others can make money.

Having people make money by publishing is crucial to the success of the network publishing system. But there is a culture clash here: While most people would be perfectly happy to give their words away for free, there are some words that are worth paying for, and we could all access those if a good chargeback mechanism was in place.

IW: *How do you compare WAIS to other forms of electronic distribution, such as CD-ROM and the older, non-consumer online services?*

KAHLE: WAIS is very much on the publishing model. WAIS publishers control the distribution of their work so that they can have people subscribe, or have 30 days for free, or make it so users can see headlines but not the documents. They can arrange their business model in many different ways.

It is advantageous over CD-ROM because it is very easy to make updates, and to make much larger collections of info available. Unlike CD-ROM, where you are creating all content and giving it to people and hopefully they don't abuse it, you have control. It is easier to distribute to those people because it is using a shared network backbone.

Disadvantages? We don't have the bandwidth that CD-ROM has between the disk and the screen. That is a limitation compared to CD-ROM.

In comparison with Dialog or Mead Data, what people are looking for is to use the power of their desktop machine instead of just as a dumb terminal dial up, so there are those services now available on the Internet.

Another difference is cost. Where mainframes cost millions, putting out a CD can cost $100,000. With networks, to make yourself a network publisher, costs between $10,000 and $50,000. For that you can reach a worldwide audience serving thousands of users a day. This change enables many more people to become publishers. That is where we see the exciting aspect of this.

IW: *WAIS the company and WAIS the search tool have been strongly identified with the Internet, but now you've been acquired by America Online. From your perspective, how is the relationship between the online services and the Internet changing, and how will it affect publishing on the Net?*

KAHLE: WAIS technology is for publishing on the Internet, which has grown in importance in the last few years. AOL's interest in WAIS is in pushing "open" technologies to hedge against upcoming proprietary systems. "Publishing" has

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Net Day—Start Your Morning Right

Our new programming guide, This Week on iWORLD, is located right on Net Day's home page. You can use it to zip right to your favorite daily and weekly iWORLD news and features. For daily fare, in addition to industry standard Cowles/Simba's Media Daily, we offer news feeds from ClariNet News, Individual Inc.'s NewsPage, and soon-to-be-announced sources.

Every Day, Every Week

Besides that, we have a full week's worth of exciting new programming. Each Monday morning we post Web Week Monday, our weekly feature about web development and use in the commercial sector, from the editors of Web Week magazine. On Tuesday, it's Net Across the World, news items about the Internet from around the world. Wednesday brings VR Bytes, the best roundup of virtual reality developments available anywhere in any media. On Thursday it's iWORLD Exclusive, with in-depth coverage of issues that impact the way we run our net businesses. Finally, IW Friday offers a pertinent analysis of the week's big net stories, including scoops and exclusives, from the Internet World magazine bullpen.

And That's Not All

In our newly christened Newsstand domain, we are pleased to feature Information Today, the monthly newspaper for users and producers of electronic information. Published by Information Today Inc., this monthly web version offers the latest news and analysis about the online industry, product announcements, and the full-text of key articles and featured columns.

Seminars and Trade Shows

You'll find detailed programming for Web Seminars with links to speakers and exhibitors right here on iWORLD. In addition, our Fall Internet World '95 program and exhibitor list are up, as well as all the goods on our new Internet World Australia Asia Pacific 1995 Exhibition/Conference in August, and next year's Internet World Canada '96, the largest conference in Canada devoted to the net.

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grown more complicated as more data in different formats are processed and user expectations rise. We help Net publishers with their problems—from data handling to billing to advertising. AOL helps us with this through funding, technology, and access to their customer base.

The challenge the Internet has raised is one of open vs. closed, participatory vs. proprietary. The Internet is a celebration of the open, and we are getting our chance. There is a huge investment in time, infrastructure, and public training going into the Internet. But if we don't find a way to make this investment pay back, the experiment will die.

Maybe surprisingly, that is why we sold WAIS Inc. to America Online. Once a closed system, America Online has decided the best way to win as a minority player is to raise the quality of the Internet as a defense against upcoming proprietary online systems. AOL is large enough to have an impact, but small enough to think it cannot monopolize.

At that point, WAIS Inc.'s mission to "help publishers make money by publishing on the Internet" became strategically important to AOL. To WAIS, an acquisition meant enough leverage to deliver on a larger scale.

If the Internet community loses, then proprietary systems will replace the open ones: proprietary payment systems, proprietary page layouts, proprietary three-dimensional chat protocols, proprietary "extensions." WAIS Inc. is here to enable publishers to more than make back their investments. An open Internet is the best way to achieve this.

IW: *Can you talk about the AOL deal?*

KAHLE: We are a wholly owned subsidiary, a separate company, with the same charter for producing products and production services. What we get out of it is two-fold: one is the resources to grow well. Even though we were tripling each year profitably, there are corners you cut when you are bootstrapped, and this allows us to do a better job with our mission. The other aspect of the acquisition is we are tying into a larger organization that has a large user base.

We are still a company that serves publishers so their information can be accessed from any network, not just AOL; but we can leverage AOL to prove some of the business models that eventually this whole industry will adopt.

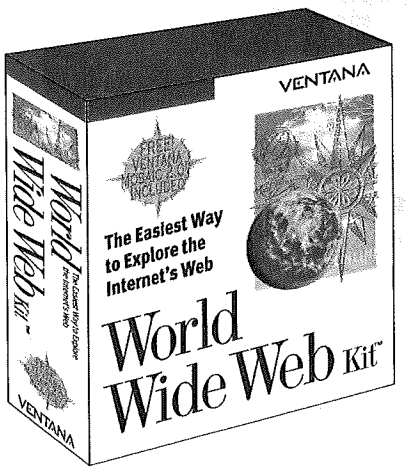
IW: *There is a lot of animosity and jeering towards AOL by users on the Internet. Why is that?*

KAHLE: You can paint AOL in a different light than the Internet community sees them now. There is the idea that AOL is just sponging off the Internet, and what we see is a change. AOL's approach was to gateway to Internet functions, but by buying and funding companies such as WAIS and others with an open charter, this is creating a different AOL. It is not done as altruism, but strategically for all the right reasons. The fight the Internet community has had to keep open standards is being embraced by AOL.

AOL is bringing on board a consumer group that I see as healthy for the Internet, and making dial-up access to the Internet understandable to larger communities of people. If the Internet wins, AOL wins.

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IW: *AOL as a white knight for the Internet?*

KAHLE: They don't see themselves as big enough to be a monopoly, and what you do when you aren't big enough to be a monopoly is to work on the part of open systems. That is how Sun ate into DEC's market.

There are only a few players that are big enough to think they can dominate this area. Microsoft, maybe, and I would imagine the phone and cable companies will try. So what we are trying to do is to get an open infrastructure to be good enough at searching and finding things to promote the open technologies.

IW: *So what is AOL's strategy in buying you?*

KAHLE: Their purpose in buying WAIS, GNN, Medior, and Webcrawler is a strategy to raise the quality of the open Internet and a strategy to compete with MSN [Microsoft Network].

IW: *What are you going to do about MSN?*

KAHLE: We see MSN as another distribution channel, and to the extent we can help our publishers publish on MSN as well as the open Internet, that will be our strategy. The best argument for openness is quality. And we are here to make the quality piece go forward; and AOL sees that as a strategic requirement to battle Microsoft Network.

We don't see the world condensing into AOL and MSN information providers and readers. We see this as staying open so there are information providers and there are readers. And what our publishers want is one-stop shopping to make their information available to as many customer sets as possible.

IW: *Steve Case has made some very strongly worded statements against Microsoft in which he compared the operating system to the dial tone of a phone and a common carrier, and claimed that bundling MSN with Window 95 was denying consumers choices.*

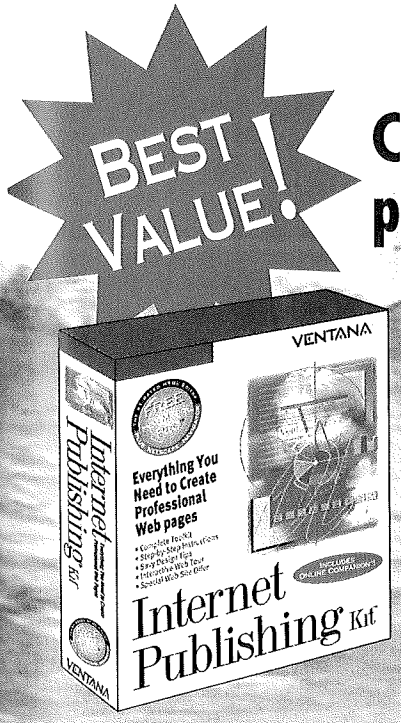
KAHLE: I actually think he is right. There are some common-carriage issues there. People very often use the software that is bundled, and as computers mature that seems to be happening at an even faster pace, so that either you are bundled or have a niche market. Microsoft has a strong position in the bundled market.

IW: *What about working with other AOL acquisitions? Will GNN be publishing with WAIS? Will BookLink build in special WAIS hooks?*

KAHLE: We'll be working more with GNN. The acquisition is still very young, and we sister companies are in the process of understanding each other to figure out how we can pull together new services.

IW: *Where do you think all that puts your company in one to three years?*

KAHLE: There is always room for high-end systems for the best publishing tools and services. We are finding that our publishing partners are realizing how difficult it is to do a world-class product. It used to be enough to throw your documents into a Gopher and you were done. Now you



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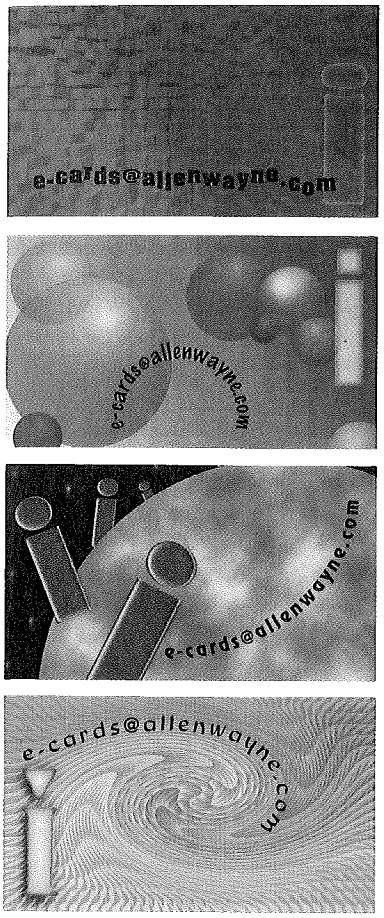
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CIRCLE NUMBER 91

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IW: *When you look five or 10 years out, who do you see publishing on the Net and who do you see generating data—individuals, organizations, automated systems like weather satellites? Which of those are your customers and what are you doing for them on the publishing side?*

KAHLE: We are serving those who are trying to repurpose their publications. Like McLuhan said, the new medium contains the old medium. It's not because there aren't clever people out there who want to use new media in new and different ways; it's just that someone has already paid for content to be built. So most of our customers are currently in that camp.

There are growing numbers of companies, though, that are specifically targeted for the Internet, which is not really cross-purposing. Time Inc. has 100 journalists working on Pathfinder, which is a large operation, and it indicates the cost of generating new content. Also, the Ringo system is being commercialized, so they are in startup mode. That is completely new and different and couldn't have happened before.

There is a program AOL has called the Greenhouse, to help info-entrepreneurs create their dream by seeding them with small amounts of money to help them get out there.

So we are seeing a new wash of content coming onto the Net, and it is often not straight text, it is weaving together multiple sources, like Yahoo or Webcrawler, that are serving a very useful purpose and a new medium that does not have final print or publication.

IW: *Any other thoughts on your future economic opportunities on the Net ?*

KAHLE: The people that are making a lot of money right now are the plumbers—people who are making bandwidth available, so cellular, cable, and phone companies all are going nuts in terms of increased demand. Next comes the information services groups, and that is what we are oriented towards. We'd like to get at Sega and Nintendo users and those set-top boxes that are starting to network. Hooking databases in the back end of such devices will bring a phenomenal opening up of applications. ■

Jeff Ubois (jubois@netcom.com) writes about the Internet and other topics for the trade, business, and popular press.

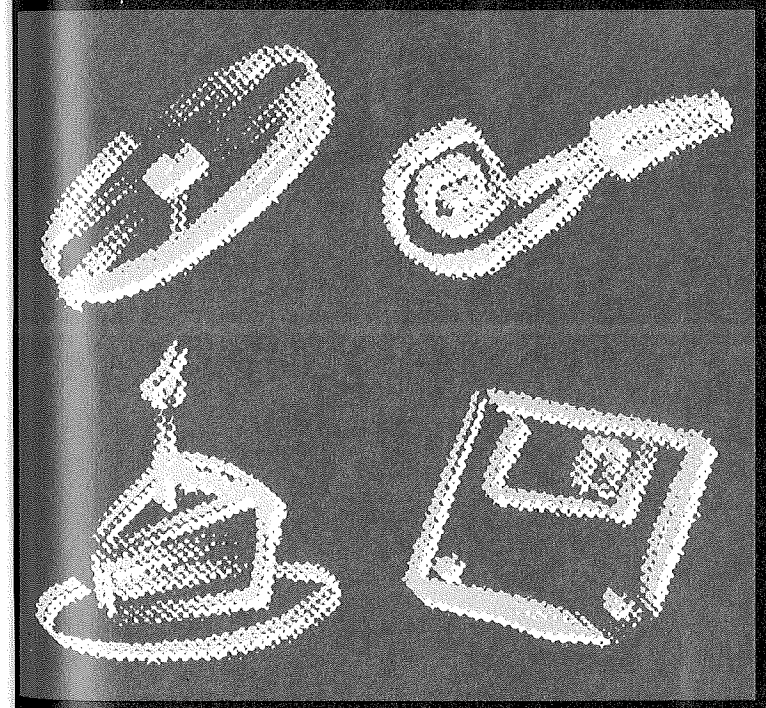
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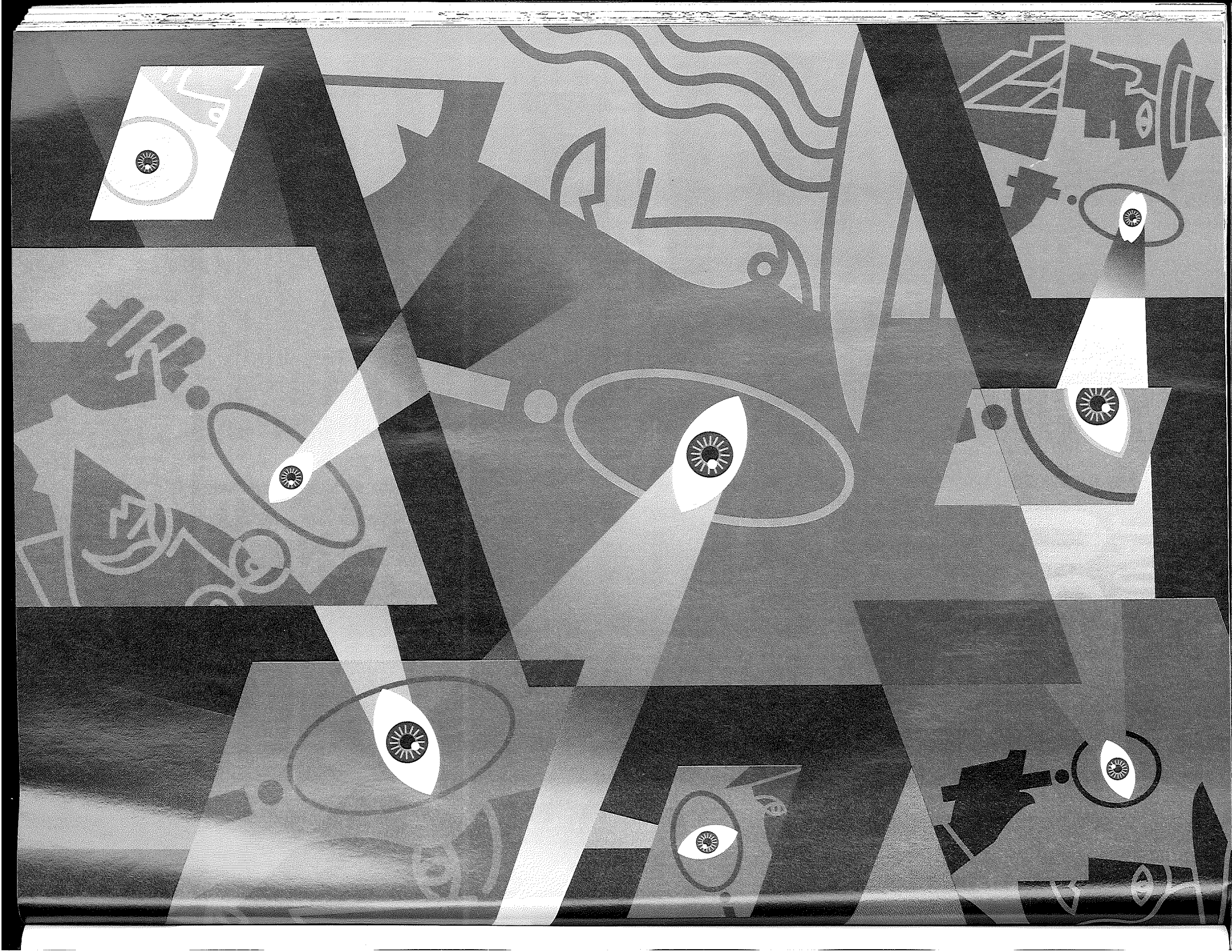
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CIRCLE NUMBER 73



Private investigators are pounding the Internet beat to track down subjects and dig up information.

BY CARY TENNIS

Net Noir

Private investigator Joseph Seanor left the U.S. Department of Justice two years ago because he loved investigating computer crime but wanted to be his own boss. Now he uses the Internet, bulletin-board systems (BBSs), and online services to track missing persons, protect companies from theft, perform background checks, and for other traditional private investigative work. He is not alone. Although estimates are that only 10 to 15 percent of private investigators nationwide are using the Internet, many more use computers and modems to gain access to private information services such as CDB Infotech, TRW, and similar data banks.

Investigators on the Internet and commercial online services share tips via newsgroups and mailing lists, and have created innovative methods for tracking people. For example, Stanford's Netnews Filtering Service allows them to search newsgroup postings by keywords, which can turn up discussions that may lead to new information and leads. When a match is found, the user is notified by e-mail. (See **http://sift.stanford.edu**, or send a message to **netnews@db.stanford.edu** with **help** in the message body.)

For financial investigators, the Edgar Project's SEC filings make life easier and cheaper (**http://edgar.stern.nyu.edu**). Investigators who track international fraud and money laundering have turned their concerns to "virtual banks" and have begun monitoring mailing lists and discussion groups to keep up with the latest in electronic funds transfers.

Seanor and his new partner, veteran Houston investigator Ed Pankau, recently formed the **alt.private.investigator** newsgroup, where postings can be found on issues ranging from how to trace a biological parent to how to get a private investigator's license. Investigators discuss the ins and outs of cases (albeit circumspectly, because details are confidential), and individuals looking to hire an investigator also post in the group.

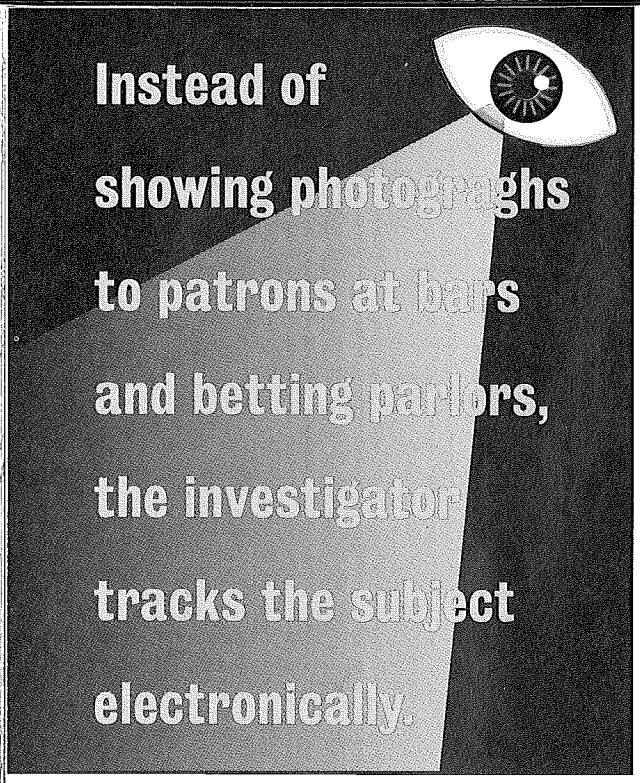
Mailing lists of interest to private investigators include InfoPro, a forum founded and moderated by due-diligence consultant James Cook; *Offshore*, an e-journal available for $20 per year; and Private-Eye, a growing mailing list for investigators and interested lay people.

InfoPro boasts members from associations such as the Society of Competitor Intelligence Professionals, the National Association of Former Intelligence Officers, the World Association of Detectives, Investigative Reporters and Editors, and many others. Members also include representatives of Dialog, Mead Data Central, and other large information providers. InfoPro is a private list, primarily for those on the investigative side of the information professions. To request membership information, send e-mail to Cook at **jcook@netcom.com**.

A recent issue of *Offshore* included articles on offshore business corporations, money laundering arrests, intelligence online, the growth of the Internet, and a Web site for worldwide tax info. For subscription information, send e-mail to Arnold L. Cornez, J.D., at **offshore@dnai.com**.

The Private-Eye mailing list, set up by Seanor's Cibir Corp., is a forum for

ILLUSTRATION BY DAVID FLAHERTY



investigators and potential investigators to discuss matters ranging from how to find a lost biological parent to how to combat fraud on the Net. To subscribe, send e-mail to **private-eye@netcom.com**.

As mentioned, investigators are combing BBSs and Usenet newsgroups to locate missing people. In one case, Seanor was tracking a person known to have an "alternative" lifestyle. By downloading a list of alternative-lifestyle BBSs nationwide from the Internet List of Lists site, he developed a profile of his quarry and was able to track him across the country and eventually identify and contact him.

The concept is traditional in investigative practice: Perform a methodical search, based on available information, of every place a subject might be found. But the means is new. Instead of showing photographs to patrons at bars and betting parlors in a subject's neighborhood, the investigator tracks the person electronically based on his or her interests and habits.

Another way in which investigators apply old principles to new technologies is through specialized databases, more of which are becoming electronically accessible. "Whenever I need to find a person who was once a bowler," said Ed Pankau, "I can access the database of the American Bowling Congress. If you've got a hunting and fishing license, we can track that."

In one case, Pankau was having trouble finding the secretary of a bank president suspected of fraud. The suspect had changed her name and moved. He realized that if she were to continue working as a high-level executive secretary she would most likely have to be a notary public. Explained Pankau, "We just contacted the state notary board, and its database found she had gotten a new name and moved out of state, and it located her." The case shows how a person need not be *on* the Net to be found *through* the Net.

"You have to look at the individual you're dealing with," said Seanor. "If the individual has a specific hobby, such as ham radio or race cars, you can post notes on appropriate Usenet newsgroups looking for somebody similar to this person. The replies you receive can be clues that may eventually lead you to your quarry."

As one might expect, much of the work of a high-tech investigator involves high-tech crimes. In Pankau's case, they are crimes involving electronic funds transfers and virtual banks. Since the United States cracked down on the use of numbered bank accounts by U.S. citizens, criminals and legitimate financial advisors have scrambled to find new ways to move money confidentially and minimize reportable income.

The concept of the virtual bank troubles Pankau. "That's going to be the new nightmare of our business," he said. "It's an entity that does business as a bank but has no physical location, no strongbox or safe, but literally operates electronically." First Virtual Holdings, among the world's first electronic merchant bankers, began operation in May 1994 (visit **http://web.fv.com**). First Virtual uses a two-tiered system through which customers and merchants make deals online while all monetary transactions take place over separate lines not accessible from the Internet.

Pankau is more worried about banks operating privately, transferring funds through encrypted e-mail messages. "Just suppose," he said, "you encrypt a message with wiring instructions to have money sent somewhere with a certain password. Then all one would have to do would be to contact that bank and have them send it based on that message. It can be done. So the bank receiving the message may keep a copy of it, which would then help us trace it; but if they didn't keep a copy afterwards, it would be like an invisible transaction."

Invisible transactions make Pankau's job more difficult because money is often the trail that leads to a criminal. Hidden transactions also worry Cook, whose clients include wealthy private investors. He relies on public records such as federal bankruptcy filings to check the financial status and background of his clients' potential business partners. Not a licensed private investigator himself, Cook often hires investigators in remote areas to perform local checks, and he uses the Internet to find them. He also uses Stanford's Netnews Filtering Service to track discussions of issues and occasionally to search for names.

"There are 12,500 Usenet groups widely propagated," Cook said. "If you assume a range of 200 to 500 messages per group, that's millions of messages that you don't have time to read personally. Some people might use the service to find a friend out there from high school. An investigator may do the exact same thing as one of fifty steps in an investigative process."

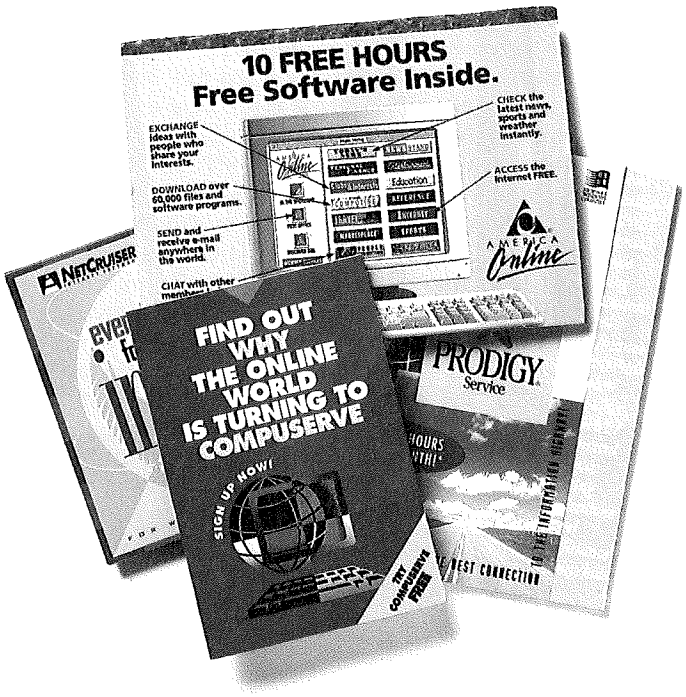
Not only is the availability of data on the Internet changing the way investigators work, it also is driving down costs. "An investigation that cost $1,000 seven or eight years ago now costs $500, thanks to computerization," said Pankau. "The greatest saving is in the time it takes to locate people. To locate someone years ago might have taken eight to ten hours in an average case. Today it takes less than an hour."

Technology also has changed the proportion of time Pankau spends in the office versus out on the streets. "The ratio of our time spent pounding the pavement versus doing research has gone from 60/40 to 10/90," he said.

As global businesses increase their reliance on private-sector security firms for protection from international crime, such innovative information-based investigative methods are sure to grow in importance. "We're going to see more and more investigations going to the Internet and involving computers in one way or another," said Seanor. ■

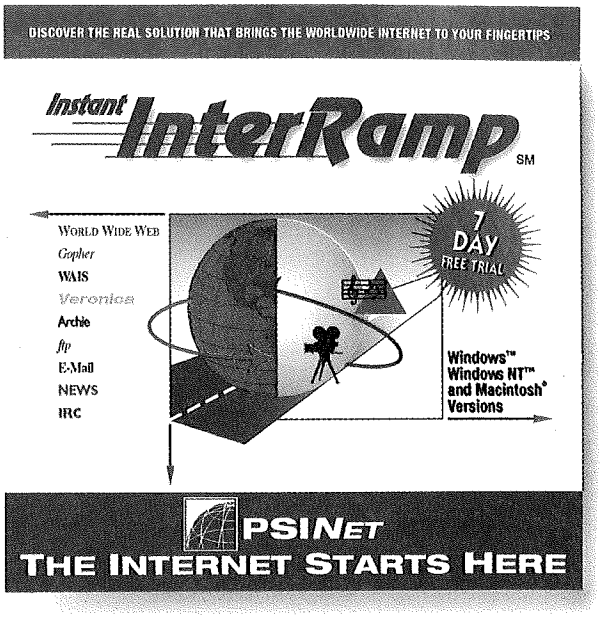
Cary Tennis (carytenn@slip.net) is a freelance writer based in San Francisco.

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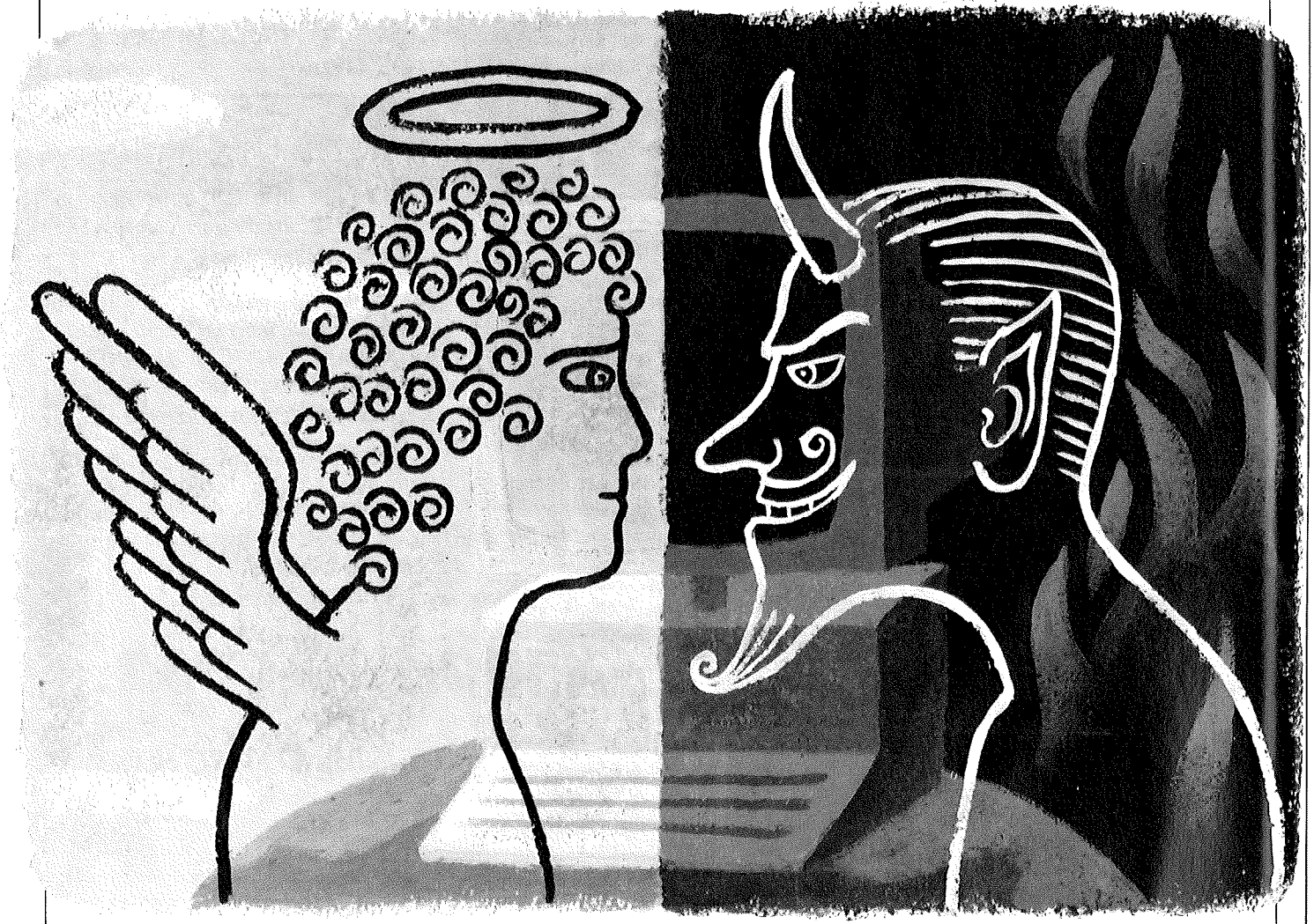
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MORAL DILEMMA



Is it ethically correct to lift a graphic from another World-Wide Web site? BY PETER REED

In computer terms, the Internet is ancient, while the World-Wide Web is a toddler just stretching its chubby little legs and waddling those first few steps. Soon it will be singing and dancing to the tune of electronic currency and online shopping. Like any child, the Web is trying to get its grubby little paws on anything within reach. And like good parents, millions of Web-heads out there are trying to instill a sense of values that will ensure a healthy productive life.

Here's the rub: The Web isn't about rules; it's about the absence of rules. The Web is filled with people who want access to every trivial bit of information they can get their fingers on—people who think it's not only important to remember all the lyrics to every song by every band since time began, but to be able to share that information with the world.

The whole idea behind many people's Web pages is being able to say to the world, Look at me! Look at what I can do! Read about me! Learn about me! Give me a job! Like my taste in music, television, literature!

Think of the Web in historic terms. Before the invention of the Gutenberg movable-type press (yes, I realize the Chinese had a printing press first, but we're following the evolution of Western technology here), the only people who had reading material were monks—who copied everything by hand—and the extremely rich. Post-Gutenberg, anyone with some spare time and a wine press could go into the printing business.

Now look at the Web. Anyone with some spare time and a text editor can start cranking out HTML documents. And once those files are on the Web, they're free game.

That's another rub. By putting your work on the Web, you're making it available to anyone with the technology to take it (that is, anyone with a Web browser). The Web is a place for sharing one's vision, and the hope of many Web publishers is to be discovered and sought out by potential employers. At the same time, we have to be paranoid about any form of legislation that tries to control Web content.

The Web is a place of anarchy, where theft and misrepresentation are a constant threat. Grabbing that shiny new GIF is too much of a temptation for some people. Stealing elements or even entire pages off the Web is a popular pastime among some users. It's easy, economical, and encouraged by some tutors as a means of learning to write HTML code. But there's a difference between viewing a page and downloading a copy, making a few cosmetic changes, and passing it off as your own.

Or is there? That's where ethics come in. You cannot legislate ethical behavior, and ethics fill in where laws can't. Law is what you fall back on when no one is following the ethical standards. But what are the ethical standards?

For example, suppose I'm wandering around the Web and I stumble onto a page with an attractive graphic. Is it ethically wrong to simply download it and put it on my home page? How about if I don't download it, but use a command (<href>) to link it to my site from a remote server? What if I download it, change its color and size, then put it on my home page? Or what if I just keep a copy on my hard drive to look at occasionally?

Common sense and the Eighth Commandment tell us that stealing is wrong. But does the presence of a picture on the Web imply a gift to the public domain? No. At least not in the way we currently understand the concept of public domain. But in 20 years, who knows?

To many users, worrying about whether or not to steal an image is tantamount to worrying about whether or not to pay a shareware fee. Who's going to know? And what difference does it make?

Tell that to the programmers and Web publishers out there. Tell it to Jack Graham, who runs a list server called Big Time Television (**http://crow.acns.nwu.edu:8082**) in which he filters the information from various mailing lists to which he subscribes and puts selected material on the Web for everyone to enjoy. In addition, Big Time includes a hyperfiction experiment called the "Walking Man Project," which lets readers submit their own chapters in the saga of the walking man.

Graham's pages are filled with custom-designed, graffiti-covered rhinos and multilayered GIFs. Big Time is a work of art, but having an interesting page is a double-edged sword.

"The Web offers an easy venue for quick and dirty information piracy in the form of our good friend <a href>," he says. "I've actually caught other Web publishers inlining images that I created on their pages. Do I take a dim view of this? You bet. When a Web publisher builds a link to a piece of information at another site, it should be quite clear to the reader that they're seeing something created by a different publisher."

At the same time, Big Time Television contains links to other pages that are of an ethically dubious nature. For example, he maintains a fan page for the Pogues and a gallery of H. P. Lovecraft images that he admits are "probably copyrighted."

Graham takes an interesting and not unpopular attitude regarding the concept of copyright violation. "If I were a publisher at a commercial site, I wouldn't be making these images available," he said. "However, since I run a noncommercial site housed at an institution of higher learning, I'm not reproducing information in a way that benefits me financially. More importantly, I don't feel that my reproduction of the information is hurting anyone else. Legally, I may be on shaky ground, but ethically I feel that I'm doing all right."

But is he? There's certainly little money to be made from placing images on the Web, at least at the moment. However, copyright infringement often is ruled according to how much a thief profits from a theft.

Copyright is about control of distribution, and the Web is a place where distribution can be controlled by individuals rather than publishers. Trying to limit distribution while showing your work to the world is like publishing a newspaper without letting people clip the coupons or comic strips. It works in theory, but not in practice. That's the beauty and terror of this new medium: Some of the ethical burden falls on the reader, who can no longer plead ignorance.

Jonathan Eisenzopf is a Web publisher who likes to keep his feet planted on terra firma. He sees the problem as one of perception rather than ignorance. "I think the problem is that for some reason people think the Internet is different from the real world and is oblivious to human realities," he said. "This is a serious conceptual mistake. The Internet may be a new and different means of communicating, but people carry this an extra step and assume that the people are new and different too. This is incorrect."

If a person uses an image on a commercial site that is not his work, and he does not get permission to do so, he is both morally and legally responsible for his actions, argued Eisenzopf. "It is true that people on the Internet share information more than most people do; however, these programs, graphics, and resources are freely distributed by their authors. If

Illustration by James Steinberg

someone assumes that it's OK to do this anywhere with anything, then someone may find themselves with a lawsuit. It's a different playing field, but the rules are the same."

Thomas Boutell, another Web publisher, agreed. "Although copyright is automatic on all creative works," he said, "many users don't realize that placing an image on the Web doesn't constitute giving it away. It's important for Web authors who are concerned about the theft of their materials to assert their copyright plainly. That takes away the ignorance argument."

Many users don't realize that placing an image on the Web doesn't constitute giving it away.

Boutell also has some advice for potential Web publishers to help them protect their custom graphics. "One interesting issue is the theft of inline images, particularly seemingly trivial balls and bullets that actually take a good while to design nicely. A number of image authors are dealing with this problem by placing comments in their GIF files. Since the GIF comment facility is little known, many thieves don't bother to look for them, and can be confronted with clear evidence of their use of the image. Of course this is just a speed bump."

Prodigy just unleashed two million people onto the Web, America Online has hooked in another million, and Windows 95 will put a few million more in contact with the Web. Although commercial online users aren't the most schooled in the fine art of netiquette, the influx of such numbers is going to increase the amount of ethically questionable activities on the Web and shift the attitudes of Netizens regarding what is ethically questionable.

"All artists are ultimately at the mercy of the good will of those who use and view their works," said Dr. Jim Hood, Web publisher and chemistry professor at Middle Tennessee State University. "There have always been duplicators, and even the early masters had portions of their work completed by apprentices. So I find some of the concern about artistic protection to be a bit spurious.

"You can't legislate ethics, but you can make people pay if they wish to play loose with the values," he continued. "When I create a work that may have commercial value, I make sure I put electronic signatures in the work. It is always possible to sign an electronic work in such a way that it takes more effort to remove it than to generate the work originally."

Hood said concerned Web publishers should post only low-resolution versions of their images. "I really think the rule should be, if you want to sell it, make them pay before they see the real thing. Let them see a postage-stamp-size picture at 35 dpi. Even Photoshop can't improve it to decent quality."

Ultimately, it comes down to a decision by a publishers about the content of their pages. They should question whether they can afford to make their work available to the public.

Hood agreed, adding, "It's called taking risks for your art. I'd argue that guaranteed payment for art tends to reduce its quality. I don't mean to disparage commercial art, but all of the masters had two levels of art production: art they sold, which, with the exception of some of the Dutch painters, was crap, and art that came from the heart and soul, which most of their contemporaries wouldn't buy for anything."

While researching this article, I posted a query on the **alt.culture.internet** newsgroup regarding the ransacking of home pages down to the very last GIFs. Jonathan Buttelmann, a student at Ohio State University wrote, "While I agree that, just like a book, it is technically plagiarism to copy elements of another's home page without citing the reference, I wonder if the ease in which one can now do so won't change our thoughts about ownership of ideas a little.

"If you want that 'under construction' graphic, are you going to redraw it yourself (supposing you're a terrible artist and have awful drawing tools) or copy it from someone else's page? You make the call."

Web publisher Ram Samudrala wrote, "The only guideline I'd suggest is the Sartrean existential tenet: Ransack if you honestly don't mind your stuff being ransacked. I have a bit of stuff out on the Web and it's totally free for ransacking!"

Bill Koch, sysop for Atomic BBS wrote, "If people want to use a graphic from another's home page, they should ask permission. Many of the graphics on our page have been custom-designed for us by various artists/designers, and we would be upset to find they had been used without permission. If the image was being used in a manner that profited the other party, or impacted our business, we would have grounds for a lawsuit. If people want to use images from our site on their pages, we would probably ask that the images (if originally from us) were used in a link back to our page."

Web people seem to feel that it is ethically correct to ask permission to use graphics and other elements from people's pages, as well as to ask before placing a link from your site to another person's. This seems to be more important when linking personal and business pages than when linking mega-pages (big corporations, various hot lists, Internet malls, Internet service provider home pages, and so on). The larger sites are more likely to welcome the additional traffic and to be able to bear it.

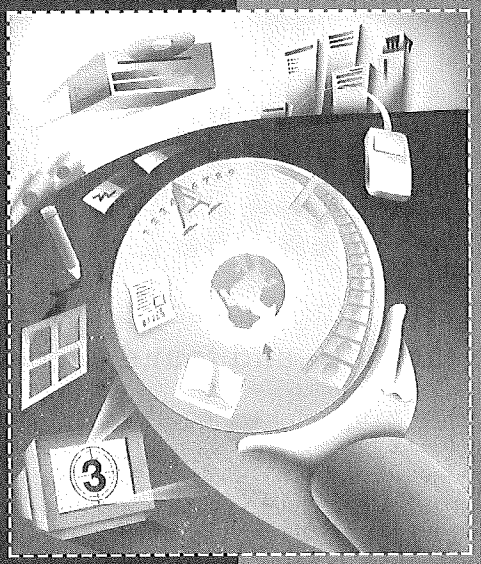
Asking permission is a major theme among amateur Web ethicists interested in protecting their work. They seem to want proper credit rather than compensation. In an age where information travels across the globe in seconds, getting permission from a graphic designer shouldn't take more than a day or two.

As Web publishers, we have a need to keep the Web fresh and interesting so it doesn't stagnate and go the route of the CB radio. But as Web parents, we are responsible for the kind of information we make available to the world.

Although standards of ethical behavior may vary, there is one issue on which everyone can agree: If the information you stumble across is so good that you have to have it, ask permission. The technology that allows you to steal whatever you come across also enables you to easily contact the author. Asking permission might take a little longer, but it will save you some hassles along the way. ■

Mike Reed (jutopia@edge.ercnet.com) is a freelance writer and playwright based in Murfreesboro, Tenn.

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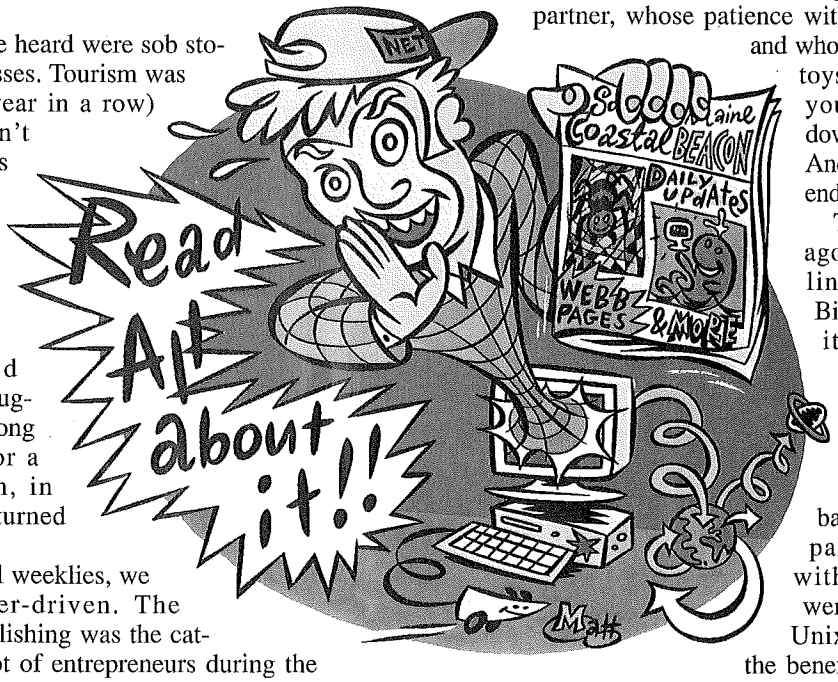
OVER THE RAINBOW

When a down market caused sluggish sales at a small New England newspaper, it turned to the Net—and found success and happiness.

Two years ago, my partner Terry Kozloff and I started a small weekly in Southern Maine called the *Southern Maine Coastal Beacon*. We had been in the newspaper business for more than a decade and wanted to go out on our own. We had spent a lot of time listening to advertisers in our previous jobs, and this new paper was designed to meet some of their needs. We designed it as a feature newspaper, a free weekly with a circulation of 25,000.

The paper broke even after 10 months of operation, a success story by anyone's standards. However, the rate of growth wasn't what we had hoped for when we started, and while our estimates were, like every entrepreneurs', a little on the rosy side, we were disappointed by last summer's and fall's performance. The whole economy seemed stagnant.

All summer all we heard were sob stories from local businesses. Tourism was down (for the fifth year in a row) and businesses weren't seeing the revenues they anticipated. And as any publisher knows, if advertisers aren't doing well, newspapers won't do well.



We continued through the winter, plugging along, working long hours and hoping for a good summer. Then, in February, the world turned upside down.

Like a lot of small weeklies, we are highly computer-driven. The advent of desktop publishing was the catalyst that allowed a lot of entrepreneurs during the '80s go into the publishing business because the costs of putting out a publication dropped dramatically. As a result, many small newspapers have been at the forefront of the computer revolution.

We started our paper using a 486 PC, a scanner, and a printer. We also had a modem, which wasn't very useful initially. We used it occasionally to communicate with writers who had the equipment to upload their stories from their homes. Beyond that, the modem remained unused. It incorporated a fax, but we found it easier to have a fax running separately, so we never used that function.

One day, about six or eight months ago, we got a disk in the mail from America Online with a free 10-hour trial offer. Well, I've always been a sucker for freebies. So I stuck the disk in the drive and cranked it up. After some cute graphics had scrolled by, America Online asked me to choose a telephone number; the closest one to Saco, Maine, is Portland, Maine, and it's long distance. So I picked it, a lot more flashy graphics rolled on by, and presto, I was online with America Online.

I wandered through the chat forums, briefly looked at *Time* magazine, and downloaded some shareware Windows files. I was eight hours into my 10 free hours online when the bill came: $180 in long distance charges. My partner, whose patience with computers is limited, and who knows my penchant for toys, shut it down so fast you could hear the windows rattle. I disconnected. And that, I thought, was the end of that.

Then about four months ago, a company leased a line from Portland to Biddeford, Maine, and set itself up as a local Internet provider. Calling itself the Biddeford Internet, it offered a flat access fee of $1 per hour for basic accounts. Even my partner couldn't argue with that, so shortly we were up and looking at a Unix screen and enjoying the benefits of e-mail. I discovered that my parents, who currently teach in Macau, also had e-mail, so we now write to each other regularly.

But of course, we were hearing more each day about the Internet, how it was fast becoming this huge phenomenon with virtual malls and cyberspace and all this other amazing stuff. The more I wandered the dark Unix alleyways of the Internet the more I kept running into interesting sites with gobbledygook all over the screen and hundreds of [IMAGE]

Illustration by Matt Campbell

indicators. I knew that I wanted to upgrade to a PPP/SLIP connection, so I could see what was really going on.

Now, remember, my partner is the one with the financial sense. She had already been bitten once, and I knew that if I was going to see those wonderful images, without additional expense, I was going to have to have a darned good excuse. So I went to talk to the Internet company, and we did a little dealing, and I downloaded a lot of shareware from sites all over the country. Long hours were spent attaching programs to Windows sockets and learning about SMTP (Simple Mail Transfer Protocol) and other such things, and bang! PPP-enabled logon succeeded and we entered the world of the 21st Century.

It took only seven days of wandering the Windows world of the Internet before my partner and I were convinced that the *Coastal Beacon* needed to be online. We could see a few weeklies and a few big dailies playing around and developing online sites, and we knew that we were about to enter the biggest publishing race of all time—the race for the Internet.

Why should we join this race? Because, in February, we knew that within a month we could be the equal of almost any newspaper in the world, online. We knew that if freed from print costs and distribution expenses we had an opportunity to leap into a new market and develop it. How many chances do you get to compete head to head with the biggest boys on the block?

We wanted to be the first in Maine, the biggest in Maine, maybe bigger than that. (We didn't quite make it as the first, but hey, there's room for two of us, at least—and that's the total at this counting.) Seven days from making that decision, the *Coastal Beacon* went online, on March 16, 1995 (**http://www.mbeacon.com**). We found an HTML expert who helped us build the first issues of the online *Beacon*. We're doing it ourselves now, and lots of things are starting to change.

Since March 16 there have been a few firsts for a little weekly from Maine. We have moved into publishing home pages and building Web sites ourselves. Every day we learn more and can offer more. We've talked with major ad agencies who would never have given us the time of day before. We've talked with some of the biggest retail operations in Maine and are now working with several of them to develop home pages, catalogs, and hypertext links. We have developed an online advertising package for local and regional businesses. We have formed new corporate relationships to market and promote new ventures. We've gotten about three hours sleep a day for the past month. But we're building a new future, brighter than anything we could have imagined just a few short months ago.

Once, the computer was a tool that assisted publishers in producing their various goods. Now, the computer itself is the publishing medium, and it is as if the walls have fallen outwards and we are suddenly in a vast open space, a space of limitless opportunities and unimaginable possibilities. Here are just a few of the instantaneous changes that occurred when we went online:

- We went full color. Color costs nothing on the Internet; it's just a larger-size graphics file.
- We are no longer weekly. That is, although we still publish on Thursdays, we now have the capability to go in and make changes on a daily basis and update listings.
- Both our online and print paper have a new column about—you guessed it—cyberspace.

This is only the beginning. I believe that all publishing ventures on the Net are just beginning to evolve. When freed from print deadlines, paper costs, and distribution expenses, print media will blossom on the Net in ways yet undreamed of. Print will merge with sound and motion pictures. A consumer will turn on the computer, open his bookmark to *Coastal Beacon*, and check the movie listings. In the corner of the screen, a small graphic about an inch square will be a picture of a man with the words "Dave's Market" beneath it. The man is waving his hands, and you can hear his voice say, "Hi, I'm Dave. Check out this week's specials! Press me!"

Perhaps behind the front-page story about the lure of wooden boats, you will see the surf crashing on the shore. I believe that print will eventually merge with TV to form a seamless medium that allows the consumer to move from one to the other, and that incorporates both. To those who say print is dead, I point to a TV commercial and say, Show me one without print! Forty years after TV arrived, print is still going strong and is due for a metamorphosis on the Internet. In fact, from all I hear, the medium most likely to lose out to the Internet is TV, not print.

So why should you be interested in getting on the Net? Well, if none of the foregoing caught your interest, here's something that will: If you don't get on the Net, I'm going to come talk to your advertisers. I'm going to tell them, "Listen, I can do everything my competitor can do. I'll print you. I'll bring you local business. I'll bring you regional business. But I can also get you on the Net. I'll tie your display ad to a hypertext link that can have hundreds—even thousands—of links detailing your whole product line, available 24 hours a day, 7 days a week, to the entire world."

And that's all any smart publisher ever need know. ■

Geoffrey Baker (beacon@biddeford.com) is editor of the Southern Maine Coastal Beacon *and* Online Coastal Beacon.

Enter HTML Land

Once you decide to get into the publishing business on the Internet, you have to learn another computer language. What? You thought DOS and Unix were enough? HTML is to Internet publishing what PostScript printers are to desktop publishers. It's what lets you put out that nice fancy product that you can get advertisers to buy space on. HTML lets you script documents with graphics, sound, and motion. It gives you (limited) control over font sizes, and placement on the page. And it is the glue that ties one document to another on the World-Wide Web.

The good news is that HTML is a simple scripting language with simple commands. There are a few new books available about how to write HTML code and lots of documentation and HTML editors on the Internet (see "HTML Helpers," pg. 62). Word and WordPerfect also have add-ons that will create HTML documents for you. One last recommendation: Join newsgroups. There are groups that exist to discuss everything on the Net, including publishing, HTML, Unix, and applications for the Internet. There are hundreds of groups filled with people with the same problems you have. So if nothing else, just ask for sympathy. I'm sure you'll get it! —*G.B.

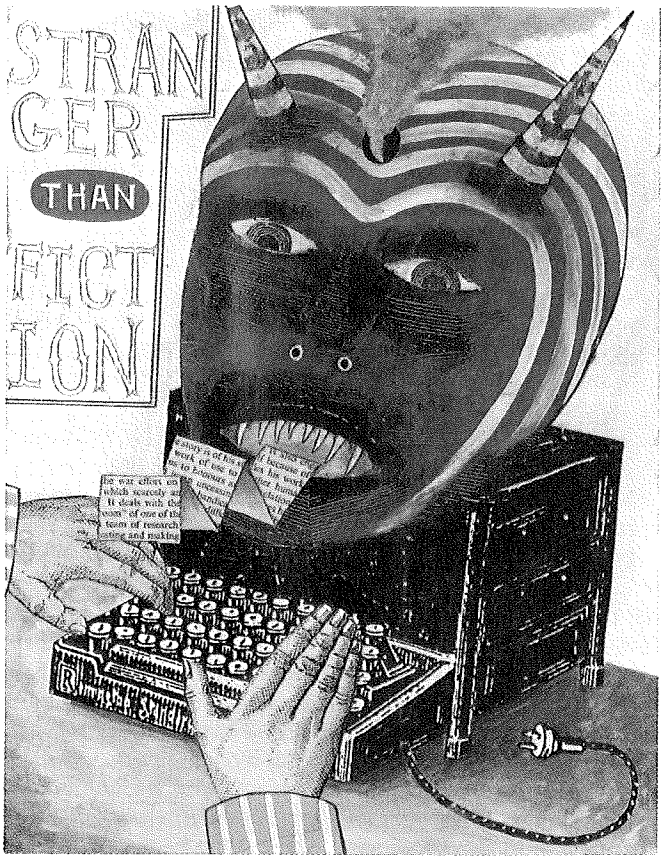
ARTIST OR CRIMINAL?

In his correspondence, Jake Baker seemed to be planning to abduct and torture someone. His case centered on whether his intent was real.

EMOTIONALLY, IT'S HARD FOR ME TO DEFEND JAKE Baker. At best, the 20-year-old University of Michigan undergraduate is an amateur writer with a repellently misogynistic imagination. At worst, Baker is using his horrific rape-torture-murder stories, posted in the Usenet newsgroup **alt.sex.stories**, to spell out his real sexual fantasies, in which case he's one sick puppy.

But the issues raised by a Michigan federal prosecutor's decision to prosecute Baker on the basis of stories and e-mail he transmitted over the Internet have nothing to do with the question of whether Baker is a nice person, or even a healthy one. Instead, the case spotlights the question of whether transmitting his material was a crime—or should be.

It was in early October 1994 that Baker posted *Gone Fishin'*, a story in which a teenage girl and her boyfriend are raped, tortured, and murdered. Later that semester he posted a second story, *A Day at Work*, which described another rape, torture, and murder—this time of a randomly chosen victim. Although many readers of **alt.sex.stories** were appalled by Baker's fiction, and said so publicly, Baker found a fan, one "Arthur Gonda," who posted from an Ontario, Canada account. Gonda and Baker began exchanging e-mail messages in which they described fantasy sexual kidnapping and murder scenarios.



In the meantime, Baker continued to write for the public as well. His career as a Marquis de Sade disciple culminated in a piece in which the narrator and his friend Jerry sexually torture a young woman, then douse her in gasoline and set her afire. Posted on January 9, the story aroused more controversy than Baker's previous stories because the female victim had the name of a fellow student. (We'll call her Jane Doe; Baker claims he chose her real name, which included the syllable "staff," because it suggested a phallic pun.)

The story was so appallingly graphic that a 16-year-old girl in Moscow who read it online was moved to tell her father how troubling she found it. Her father told his friend Richard DuVal, a University of Michigan alumnus, what his daughter had found on the Internet. DuVal was so offended by the story—posted from a University of Michigan account, no less—that he called his alma mater to complain. And that single action triggered a world of torment for Jake Baker.

The day after University of Michigan officials were contacted, Baker lost his computer privileges. Soon afterwards, he was met at his dorm by officials from the university's department of public safety (the campus police), who asked to examine his room. Baker consented to the room search, as well as to a search of his computer account by university officials. He believed, mistakenly, that by disclosing everything it would quickly become apparent that he intended no harm to Jane Doe or anyone else.

He also believed his public and private writings about violent sexual fantasies would be seen as activities protected by the First Amendment. As Jesse Jannetta, his roommate, told the *Washington Post*, Baker thought that "if he cooperated and gave the university what they wanted—told the truth—it would all work out."

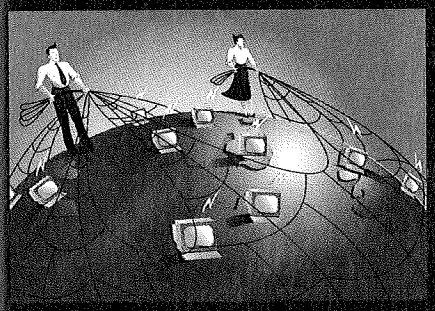
Instead, University of Michigan officials sought his voluntary withdrawal from the school. When Baker failed to comply, the administrators suspended him. Baker learned of the suspension when he was met by armed university officers after class on February 2, given a copy of the suspension letter from University of Michigan president James Duderstadt, then taken to his room and given 15 minutes to gather what he could before being escorted off campus.

If Baker thought the worst had happened, he was in for a shock. By consenting to have university officials look through his e-mail, he guaranteed that they'd find his

Illustration by Christian Northeast

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correspondence with Gonda, which he'd saved. And if the public postings to **alt.sex.stories** were hair-raising, the private mail was even more shocking. In December, Baker had sent Gonda a message that included the following:

I just picked up Bllod [sic] *Lust and have started to read it. I'll look for 'Final Truth' tomorrow (payday). One of the things I've started doing is going back and re-reading earlier messages of yours. Each time I do, they turn me on more and more. I can't wait to see you in person. I've been trying to think of secluded spots, but my area knowledge of Ann Arbor is mostly limited to the campus. I don't want any blood in my room, though I have come upon an excellent method to abduct a bitch . . .*

As I said before, my room is right across from the girl's bathroom. Wiat [sic] *until late at night, grab her when she goes to unlock the door. Knock her unconscious and put her into one of those portable lockers (forgot the word for it), or even a duffel bag. Then hurry her out to the car and take her away. . . what do you think?*

"I HAVE BEEN OUT TONIGHT AND I CAN TELL YOU THAT I AM THINKING MORE AND MORE ABOUT 'DOING' A GIRL. I CAN PICTURE IT SO WELL . . ."

Gonda responded:

Hi Jake. I have been out tonight and I can tell you that I am thinking more and more about 'doing' a girl. I can picture it so well. . . and I can think of no better use for their flesh. I have to make a bitch suffer!

It's unclear whether Arthur Gonda is a real person. No such name is listed in the Ontario tax records, which suggests that Arthur Gonda is a pseudonym, or perhaps even a wholly fictitious persona (invented, perhaps, to spoof Baker). Even so, the message from Gonda, with its expression of compulsion, is disturbing. But can we infer from Gonda's e-mail that Baker was actively plotting to harm someone? Or was he simply sharing his fantasies with a like-minded correspondent? University officials didn't think they could take any chances, which is why they suspended Baker and turned over the material to federal law-enforcement officials.

When the feds stepped in, their actions transformed the case. What had begun merely as an interesting question about the authority of state universities to discipline students who say scary things had become a federal case that raised fundamental questions of due process, criminal law, and the First Amendment. University administrators believed that, in addition to violating university policies, Baker seemed willing to commit a crime. The FBI and the U.S. Attorney's office took it one step further: They were determined to find a way to prove that Baker *had* committed a crime.

That's why, a week after Baker's suspension, FBI agents arrested Baker at his lawyer's home on charges of violating Title 18, U.S. Code, Section 875(c), which prohibits the transmission "in interstate or foreign commerce any communication containing any threat to kidnap any person or any threat to injure the person of another." Theoretically, a defendant convicted of this felony can be punished by a prison term of up to five years.

It was an interesting legal theory for the government to advance. Before they had Baker arrested, prosecutors had hinted they might charge him on a federal distribution-of-obscenity count. But that approach looked insubstantial for a technical reason: The likeliest federal obscenity statute (18 USC 1465) had been persuasively interpreted in 1987 by the Tenth Circuit Court of Appeals as "restricted in its terms to the transportation of tangible objects." (See the *United States v. Carlin Communications*, 815 F.2d 1367.)

Another federal statute that might be applied is 47 USC 223, the obscene-phone-call statute that Senator James Exon of Nebraska has been trying to amend (see last month's column). It was just as disappointing for the prosecutors, but for a different reason: The statute punished noncommercial distributions of obscenity with relatively light sentences (six months maximum).

And prosecuting Baker for mere obscenity would seem to be missing the point. What about the sense that Jane Doe (or her name, at least) had been violated? I imagine the government reasoned that prosecuting Baker for an interstate "threat" would be a twofer: The statute provided for appropriately severe penalties, and a successful prosecution would give the government an effective tool for policing speech on the Internet.

Although Baker's public and private writings on the Net were frightening in the broad sense, does it make sense to classify them as a threat? In the everyday sense of the word, Baker's writings were no threat; he took pains to ensure that his **alt.sex.stories** postings were taken as fiction. And Baker's expression of sick desires in his messages to Gonda, disturbing as they are, don't seem to be threats either.

But the government was relying on the theory that the common-sense notion of threat didn't apply; instead, they insisted, the *legal* meaning of the term was broad enough to encompass Baker's communications. In a set of proposed jury instructions on what constitutes a threat, the prosecutors submitted the following language: "A transmission contains a threat if a reasonable person would have taken the defendant's statement as a serious expression of an intention to inflict bodily harm or kidnap. The government does not have to prove that a defendant subjectively intended to threaten the person of another."

In criminal-law terms, the second sentence of the government's definition has a lot going for it. Most of the federal Courts of Appeals have held that Sec. 875(c) is a "general-intent crime," which means the government needs only to prove beyond a reasonable doubt that the defendant intended to communicate the words in question. It doesn't need to prove that the defendant intended the words to be understood as a threat. You can see why the courts have taken the general-intent approach: It keeps defendants from threatening to rob banks or hijack planes or kill people and then claiming at trial to have been misunderstood.

But the first sentence of the quoted language—the part that defines a threat—is more problematic. Because Sec. 875(c) is a statute that can be used to punish pure speech (that is, you can be found guilty even though all you've done is say something), and because speech in general is protected by the First Amendment, there is a Constitutional interest in making sure that such a "pure speech offense" is narrowly and precisely defined.

Which explains the U.S. Supreme Court's 1969 decision *United States v. Watts*, 394 U.S. 705. In that case, the Court had to interpret a statute (18 USC 871, which prohibits threatening the President)



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closely related to 18 USC 875, the statute under which Jake Baker was indicted. The justices concluded that a "statute such as this one, which makes criminal a form of pure speech, must be interpreted with the commands of the First Amendment clearly in mind. What is a threat must be distinguished from what is Constitutionally protected speech." And if this conclusion is true for Section 871, it's surely true for Section 875.

Even if the government doesn't have to prove the defendant intended a threat, said the Court in *U.S. v. Watts*, "the statute initially requires the government to prove a true threat." A statute aimed at punishing threats must be limited to *true threats*, or else it is unconstitutionally overbroad. After all, a reasonable person might conclude from listening to a Marxist revolutionary's public harangue that the speaker was willing, or even eager, to kill specific people to bring about the revolution of the proletariat. In that instance, what the government in the Baker case defined as a threat was something that would clearly qualify as speech protected by the First Amendment. In the final analysis, the First Amendment was drafted to protect whole classes of speech that a majority of the public might find threatening or frightening.

With the decision from *U.S. v. Watts* in mind, how do you distinguish merely scary speech from a true threat? Normally, this isn't much of a problem. A review of the reported cases under Section 875(c) reveals that any threats in question almost invariably meet the narrower common-sense definition of the term as well as any legal definition. Only a 1976 case, *United States v. Kelner* in the Second Circuit, has addressed in any detail the interplay between the First Amendment and Section 875(c)'s "true threat" requirement. Relying on the Supreme Court's holding in *U.S. v. Watts*, the Court of Appeals in the Kelner case stated:

"The purpose and effect of the Watts constitutionally limited definition of the term 'threat' is to ensure that only unequivocal, unconditional and specific expressions of intention immediately to inflict injury may be punished—only such threats, in short, as are of the same nature as those threats which are 'properly punished' every day under statutes prohibiting extortion, blackmail and assault without consideration of the First Amendment issues.

"So long as the threat on its face and in the circumstances in which it is made is so unequivocal, unconditional, immediate and specific as to the person threatened, as to convey a gravity of purpose and imminent prospect of execution, the statute may be applied."

Now, the trial court in the Jake Baker case was not bound by precedent to apply the Kelner case; the Baker trial was taking place in a different circuit. But the judge was perfectly free to find the Kelner case *persuasive* on the issue of what qualified as a true threat under 875(c). If he did, he was likely to create problems for the prosecution because no single communication of Baker's meets all the elements of the Kelner definition of a threat. For example, there's no doubt that Baker's Jane Doe story was "specific as to the person," but it was hardly "unequivocal" because of Baker's insistence at the time of publication that the piece was a work of fiction. This probably explains why the feds, in a superseding indictment, abandoned their claim that the Jane Doe story itself amounted to a threat; instead, the new indictment focused on Baker's e-mail to Gonda.

But the new indictment had its own problems: Even if you considered all of Baker's e-mail together and interpreted the messages as the government did, it was neither *immediate* nor *specific as to the person* in its threats. To accept the prosecution's theory of the case, you had to accept the novel argument that all of Jake Baker's public and private writings, *taken together*, qualified as a threat for 875(c) purposes. Given that the Watts case also specifies that it's the judge, not the jury, that makes the threshold determination as to whether a communication is a true threat, it seemed highly possible that Baker's trial-court judge would grant the defendant's motion to dismiss the case.

Just before press time, it was announced that U.S. District Judge Avern Cohn had granted Baker's motion to dismiss the case. In his written opinion granting the motion, Cohn was critical of prosecutors' decision to pursue the case in the first place: "The government's enthusiastic beginning petered out to a salvage effort once it recognized that the communication which so much alarmed the University of Michigan officials was only a rather savage and tasteless piece of fiction." It is not yet known whether the government will appeal Cohn's decision.

Regardless of your feelings about Baker, it's easy for a criminal or constitutional lawyer to conclude, as Baker's own lawyers did, that "the government has abused the purpose of the statute in its attempt to silence Jake Baker's admittedly controversial writings."

I agree with that conclusion, which makes it intellectually easy for me to defend Jake Baker. If only the intellectual aspect—the legal and Constitutional analysis—were the end of the story. But I still have my emotions to contend with, and I find Baker's writings vile.

And the consistency and obsessiveness of the kidnapping, rape, torture, murder theme in his writing makes me wonder how I'd feel if Baker, after winning this case, were to act out his sadistic scenarios.

The thought that gives me a certain amount of peace is that Baker has shown no sign of doing so. The people who know him best think him incapable of doing actual physical harm to anyone, and he's been declared harmless by three psychiatrists. He also was reportedly quite mortified to learn that, thanks to university authorities, Jane Doe had read the story in which the victim bears her name. "I'm really sorry that this came to her attention," Baker is reported to have said. "I never meant to hurt her."

Regardless of whether I take his regrets at face value, I have to distinguish between someone who has vile thoughts and writes fiction about them and someone who actually acts on those thoughts.

It may well be that Baker is a human time bomb waiting for an opportunity to physically kidnap and assault some woman. (That's certainly what two U.S. magistrates thought; in decisions based solely on Baker's writings, they denied Baker bail. The student spent a month in jail until the federal judge in charge of his case, Avern Cohn, approved his release on $10,000 bond.)

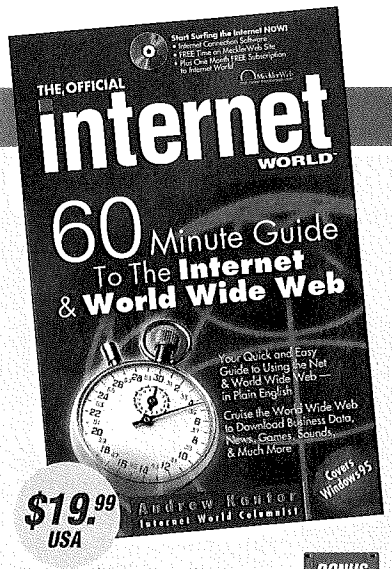
But even human time bombs are presumptively innocent. They have the right to freedom of expression, and they have the capability of choosing not to act on their desires. In a free society, we begin with the assumption that people are responsible for their actions. We do not assume that they are responsible for their thoughts, or that vile thoughts and desires make someone a criminal. And so long as I can still tell myself all this, and still believe it, I can sleep at night. ■

Mike Godwin (mnemonic@eff.org) is staff counsel of the Electronic Frontier Foundation, a public-interest civil liberties organization based in San Francisco, Calif.

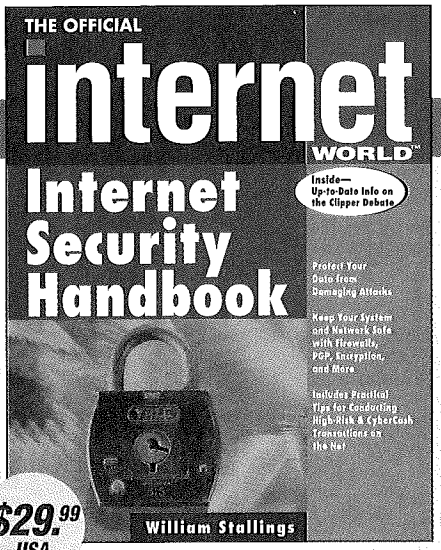
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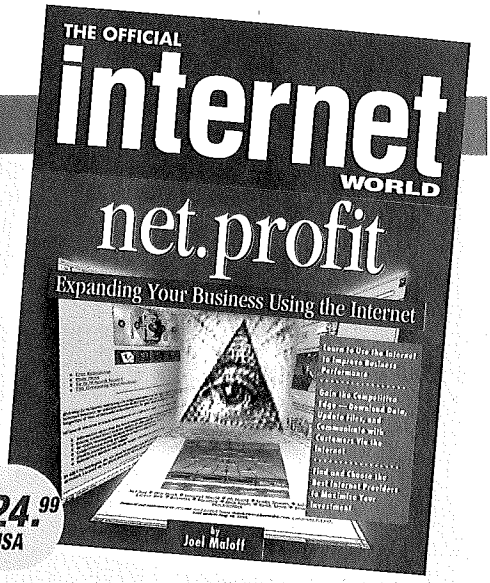
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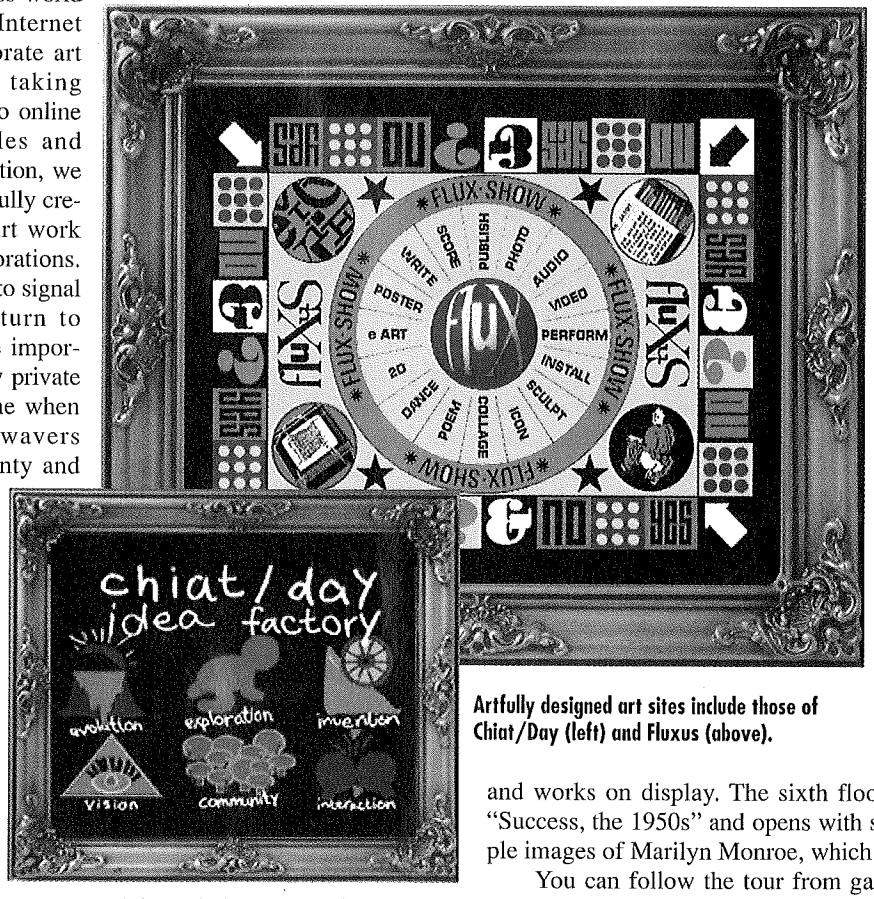
 By Kenny Greenberg

NET ART'S NEW PERIOD

The Internet art scene changes as fast as the Internet itself. Take an updated tour of some of the more notable cultural attractions.

IN JUST THE FEW MONTHS SINCE WE LAST LOOKED AT THE online art scene, the landscape has dramatically expanded and changed. While a few old favorite sites have bit their last byte, a remarkably high number of art resources have held their ground. Many of them have revitalized their look and feel by migrating from Gophers, Usenet newsgroups, and BBSs to the World-Wide Web.

As the business world merges with the Internet community, corporate art departments are taking their first steps into online presentation styles and techniques. In addition, we are seeing thoughtfully created galleries of art work presented by corporations. This trend appears to signal an unabashed return to acknowledging the importance of the arts by private enterprise, at a time when public support wavers thanks to uncertainty and political wrangling. Public art still has the greatest presence and impact on the Internet, and art on the Internet is coming of age as the technology catches up to the artists' visions.



Artfully designed art sites include those of Chiat/Day (left) and Fluxus (above).

A prime example of the changing face of corporate creativity, as expressed through the new medium we call the Internet, can be found at **http://www.chiatday.com/web**, the Web site for Chiat/Day, the advertising agency best known for it's kaleidoscopic Fruitopia campaign and its office without walls. Those of you with graphical browsers will love the imagery. The colors are vivid primaries and the shapes are soft and playful. Even the way objects are positioned on-screen is atypical.

Non-graphically equipped users are not neglected. In fact, GUI users might want to turn off imagery so they can bounce around easily through a maze of thought-provoking descriptions of Chiat/Day's philosophical approach to marketing. Participatory forums and surveys pose some worthwhile questions. And to top it off, there is a virtual art gallery where excellent high-resolution imagery is achieved with relatively few kilobytes. Chiat/Day's site is memorable not so much for its content but for its bright outlook and straightforward attitude.

I think Andy Warhol would have loved the possibilities of the layered interlaced images made popular by Web browsers like Mosaic and Netscape Navigator. In any case, a tour of the Andy Warhol Museum in Pittsburgh (at **http://www.warhol.org/warhol**) is the next best thing to being there. It begins with a photo of the elaborate doorway. From the main entrance you can choose to visit one of seven floors devoted to different periods in the life of one of this century's most influential and controversial artists.

Each floor presents you with a floor plan, a representative work, and a catalog of the galleries and works on display. The sixth floor, for example, is named "Success, the 1950s" and opens with some of the famous multiple images of Marilyn Monroe, which can be downloaded.

You can follow the tour from gallery to gallery or browse the collection of images. The Pittsburgh museum is duplicated down to the coffee shop in the basement, which is aptly named "The Underground." Along with an events calendar, film schedule, and map of how to reach the museum, there is a gift shop with items you can browse and order via a downloadable form. A generous feature of the Warhol Museum's Web site is its links to other museums and collections. Included with a well-organized menu of specific links are a series of Web robots optimized for searching art museums.

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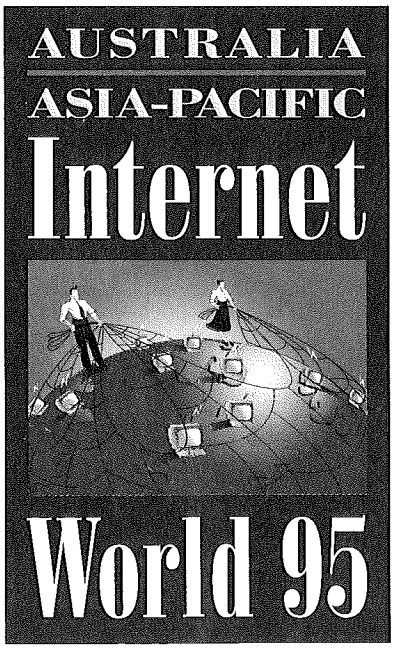
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Fluxus (at **http://www.panix.com/fluxus**) is a post-Dada-inspired online installation mounted by a group of collaborators who include the prolific video artist Nam Jun Paik. Be prepared for some kilobyte-intensive imagery as the opening page presents a huge colorful image map of a game board with a wheel of choices. Clickable selections on the wheel include video, poetry, collage, installation, sculpture, photography—and that's just half of them. Even clicking on the border of the game board is amusing. When you enter any area, several artists' installations with photos, sound, and video can be viewed or downloaded from this worldwide virtual exhibition.

Each artist in some way incorporates technology, multimedia, or networking in their work. The works are cross-referenced by genre, artist, sense, and a category called "nosense." What we are seeing at this site is the legacy of *SeOUL-NYmAX: A Celebration of Art Without Borders*, a Korean and American collaborative event from November 1994. Here the Internet has become a vehicle not only for visiting people and sites that are geographically distant, but for visiting events that can no longer be accessed in real time.

A more generalized virtual gallery is Art on the Net, at **http://www.art.net**. In its infancy last fall, it is now a vibrant resource and community for online artists and art enthusiasts. Central to Art on the Net are its studios and galleries, which are Web areas available for artists to display their work either on Art on the Net's server or by a link to other servers.

The result is an interesting array of connections to other virtual galleries and to the exhibitions mounted within Art on the Net with the assistance of its Webmasters. Artist studio areas cover the visual arts, music, video, and other genres, including a future category called hacker's art. Art on the Net is open to curatorial suggestions and it is possible to design a space or a theme for a show.

The idea of virtual galleries and participatory art is not entirely new. OTIS/Synergy (at **http://sunsite.unc.edu/otis/otis.html**), one of the first online collaborative galleries, continues to break ground with events such as its recent PANIC, a real-time, fast-access interactive art project. Many others sites, such as Kaleidospace at **http://kspace.com**, which has a commercial component, and even my own fledgling Art-O-Mat at **http://www.panix.com/kgreenb/artomat**, have set up group online shows.

FOLLOWING THE LINKS UNTIL YOU FORGET WHERE YOU BEGAN IS A GREAT WAY TO SPEND A SATURDAY AFTERNOON.

Art on the Net, by virtue of its visibility and openness to submissions and ideas from artists, is the best bet as a front-runner in this field. Art on the Net also has generous links to other resource areas. Distinguished by rambling not-so-well-ordered lists, this server has led me to try many sites I had missed or passed over on other servers. A small current-events area has deadlines and other listings of interest to working artists.

It's great to see the venerable *Fine Art Forum* newsletter in its present incarnation as Fine Art Online (at **http://www2.msstate.edu/Fineart_Online**). The old newsletter with its primitive ASCII art (a touch of the past) masthead is still there, but Fine Art now has a serious Web server hosting an online gallery, a massive resource list that includes an excellent compilation of subscriber lists for the arts, and a Gopher server. Fine Arts is probably one of two arts-related resources that still provide a slow command line interface (Arts Wire is the other).

Arts Wire is moving onto the Web with a little-known Web server at **http://www.tmn.com/oh/Artswire/www/awfront.html**. When I tried it, it appeared to be a bit slow but it has some distinguishing features, among them links to the home pages of its member artists and member organizations. Another interesting feature is Arts Wire's guest Web art tours. Once again I found myself clipping and pasting dozens of references I had not seen while surfing other sites. An archive is maintained of previous tours, which is a great way to deal with those mixes of active, not-so-active, and possibly out-of-date links that all servers tend to accumulate.

Just about all of the art sites have their obligatory lists of other sites, and following the links until you forget where you began is a great way to spend a Saturday afternoon. The current mother launchpad of such excursions is Yahoo at **http://www.yahoo.com**. It has an enormous range of areas and should be mandatory for any hotlist you compile.

The arts are extremely well represented on Yahoo. With sub-categories as diverse as Body Art, Egyptian Art, Art Festivals, Commercial Art, and more, you'll be hard pressed to come up with a category not covered. Clicking on any of the areas takes you deeper into digressions within the category.

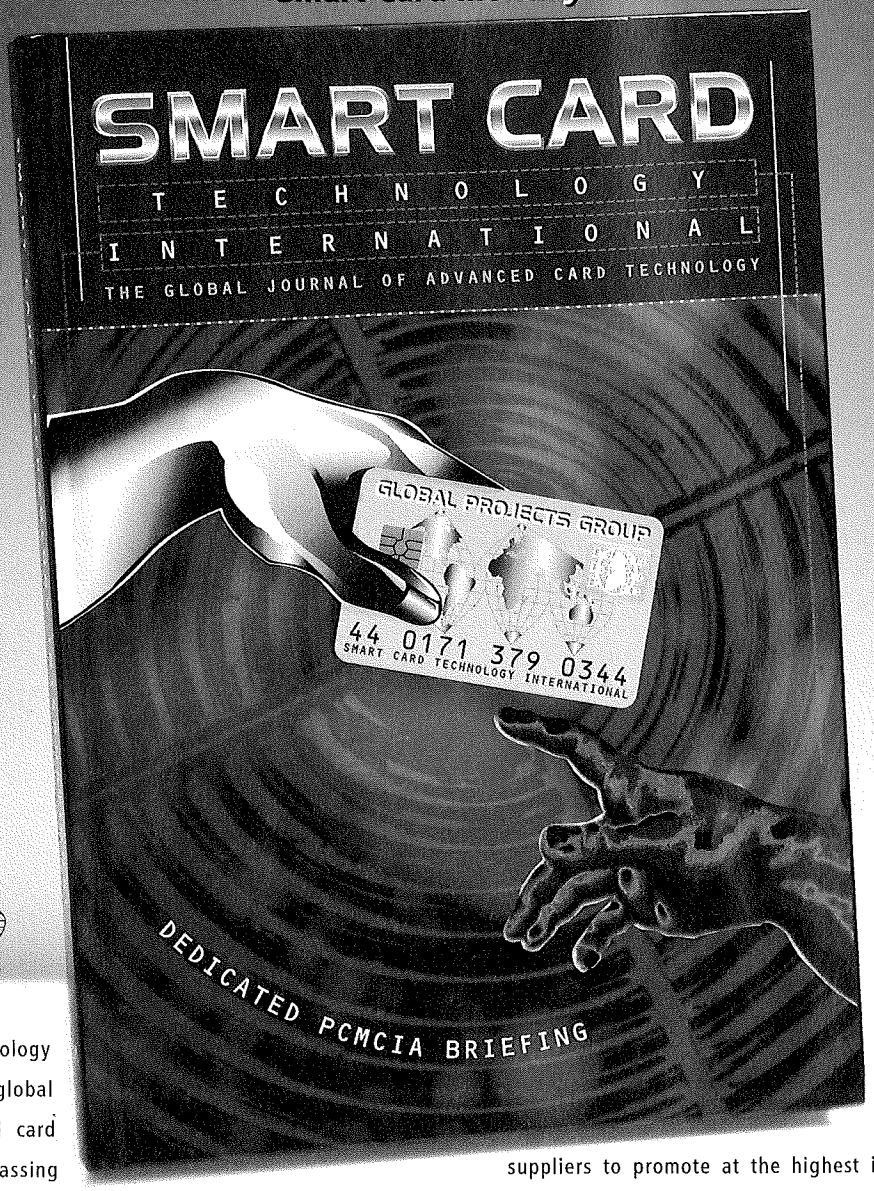
There appear to be far more sites for acquiring images listed in Yahoo's Pictures@ area than I have seen on any other list. With archives of animals, TV images, icons, and subjects as specific as climbing pictures, chemical structures, and drum corps, it is difficult to top this area as your one-stop resource for images. Music, dance, acting, and even magic are covered on this efficiently organized server. Crossover areas between art and commerce, such as fashion, also are indexed at Yahoo. In the apparel company listing, for example, it is possible to find everything from designer sneakers to information on the garment printing industry.

Artists have become a major sector of the Internet population. Although I have no statistics that show how well art is selling on the Internet (I have been fortunate in selling work online), it is clear that the exchange of imagery and ideas is an immensely popular activity. Artists are the perfect model of a self-contained industry in that they must capture attention, educate their audience, market their products, and sell them to survive.

The Internet appears, for the moment, to be a great leveler in the marketing playfield. Artists can learn a lot by studying the methodical and sometimes even timid approach of corporations to the Internet. And large and small businesses can learn from the readily expansive networks that artists create. ■

Kenny Greenberg (kgreenb@panix.com) is a neon artist and owner of Krypton Neon in Long Island City, N.Y. He authored the chapter "Art on the Internet" for Tricks of the Internet Gurus *(Sams).*

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CIRCLE NUMBER 75

 By Linda J. Engelman

TIME TRAVEL

For all of its futuristic technology, the Net for many users is a blast to the past. Here are some places to indulge your nostalgic yearnings.

IT SEEMS IRONIC THAT AS HIGH TECH AND AVANT GARDE AS the Internet is, it serves as an extraordinary medium for reminiscing about the past—like a virtual time-travel contraption.

Take a look at Usenet, for example, and all the newsgroups that focus on the whims and crazes of yesteryear. One that appeared recently is **alt.collecting.8-track-tapes**. Talk about time travel! It seems like just yesterday that I was 16, locked in my room at night, watching the effervescent blue lights emanating from my unbelievably cool, all-in-one, $100 stereo system and 8-track tape player. I'd pick up Bob Seger's *Against the Wind*, slide the boxy cartridge into the machine, and listen to it play over and over, enjoying more than anything the hushed ker-*plunk* the tape made each time it changed tracks. Life was good.

Of course, thanks to the Net (a little too late, thank you very much) I now see that 8-tracks are a collectors' item, and wouldn't you know it, I sold my Bob Seger tape at a yard sale for about a quarter some 15 years ago.

Oh well. In any case, the Internet is indeed a great place to take a trip down memory lane. In addition to the 8-track tape newsgroup, there are Web sites like Hype's Nostalgic Wave at **http://www.hype.com/nostalgia**, where you can, among other things, relive the days of Wacky Packs. There's also Judith Goldsmith's Biased Timeline of the Counter-Culture (gopher to **gopher.well.sf.ca.us /Community/60sTimeline**), which focuses on significant events of the '60s. Then there's the Memory Bank (at **http://web3.starwave.com/showbiz/memorybank**), a compilation of Oscar award winners dating back to the 1920s. And for old time radio show fans, there's the Old Time Radio page at **http://www.crl.com/~lgenco/otr.html**.

For more '60s nostalgia, try downloading a video clip featuring the legendary hula hoop. The MPEG file, called hula-hoop.mpg, is available by anonymous FTP at **ftp.cs.uni-bonn.de** in the **/pub/graphics/mpeg/movies** directory.

You'll also find the good old days documented in newsgroups such as **rec.arts.movies.past-films**, **rec.autos.antique**, **rec.collecting coins**, and **rec.music.early**.

When you've finished digging into the past, you'll find the Internet an equally enjoyable backdrop for exploring the present and of course, the future. Want a few examples? Okay, let's explore some fads . . .

Nip and Tuck

So, you think you've got sagging arms? A bit too much cellulite on the thighs? Extra-large love handles around the middle? Aw, come on, it's not that bad, is it? Well, the truth of the matter is that if you're unhappy with your body shape, you're not alone. Every year, thousands of men and women lie down on operating room tables to get the fat tucked, pinched, sucked out, and otherwise disposed of. If one of these options is something you've been considering, you may want to make a quick stop at the Body Space page on the Web at **http://www.surgery.com/body/topics/body.html**.

At Body Space, you can pick the area of your body you'd like to change, then read about what's involved in the plastic surgery methods used to improve it. Information includes surgical costs, before and after pictures, procedural information, and facts about follow-up care. A physician-locator database even lets you search for doctors in your area who perform plastic surgery, liposuction, and other body-enhancing therapies.

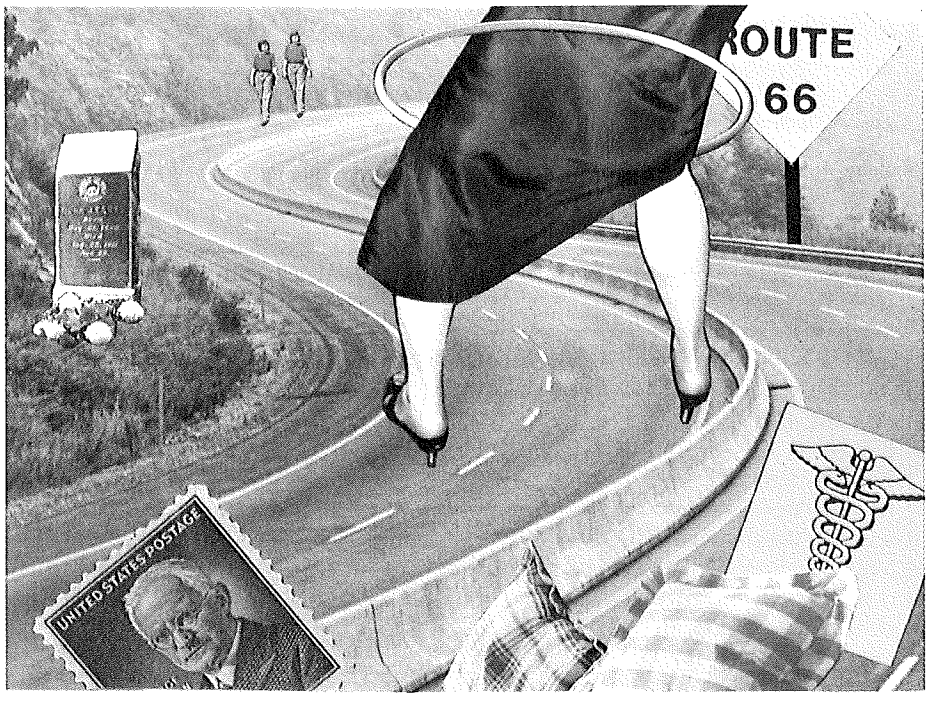


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CIRCLE NUMBER 78

Where the Expos Are

Looking for a particular trade show, conference, or exposition? Every day across the United States and abroad, thousands of people attend trade shows. The dilemma is finding the ones that meet your interests or your business needs. Now a fully searchable database of these events is available via the World-Wide Web at EXPOGuide (**http://www.expoguide.com**). You can search for upcoming events alphabetically, by date, by location, and by keywords.

Net School

Okay students, please be seated. Roadmap, the Internet training workshop, is about to begin. Your instructor today will be Patrick Crispen at the University of Alabama. Roadmap is a six-week cyberspace workshop that helps you learn how to better navigate your way through Netland. Until recently, Roadmap was offered only through e-mail, but the response to the program was so tremendous that it has been permanently installed on a computer. Gopher to **gopher.anes.rochester.edu** and select the **Roadmap Internet Training Workshop** menu item.

You'll find a syllabus, welcome message, and step-by-step lessons that tell you how to send e-mail, sign up for mailing lists, perform remote logins, use FTP, Gopher, the Web, and lots more. Of course, as with any good class, there are homework assignments, but you're on your honor when it comes to completing them. You can go through the lessons in sequence or in random order, working at your own pace. You'll be an Internet pro in no time at all. Class dismissed!

Get Your Kicks

From your desktop you can now make the journey from Chicago to Santa Monica, Calif., on the famous stretch of road known as Route 66. That's right, the road that made the song popular (or was it the other way around?) is now open to Internauts. You'll cover eight states and dozens of cities with lots of friendly tour guides to help point out all there is to see.

To begin the trip, steer straight to **http://www.cs.kuleuven.ac.be/~swa/route66/main.html**, where you'll pull over at the Route 66 home page. From there, drive west, stopping in Missouri, Kansas, Oklahoma, Texas, New Mexico, Arizona, and finally California. Along the way you can sightsee via clickable maps, browse through photo galleries, and read the stories of those who have traveled the real-life Route 66. Collect information about Route 66 associations, and select links to related materials available by FTP. It's everything you ever wanted to know about the notorious highway.

IF YOU'D LIKE TO SHARE YOUR BAREFOOT EXPERIENCES WITH OTHERS, YOU CAN SEND E-MAIL TO THE DIRTY SOLES SOCIETY.

Beep Me

You don't have your pager hooked up to the Internet yet? What are you waiting for? If Bindu Wavell can do it, so can you. Wavell is a student at the University of Colorado who decided he wanted to receive pages from Internauts around the globe. So he hooked up his "wizzy alpha pager" to the Net. As a result, anyone can now load up Wavell's Web page and fill out a form that sends a message directly to his pager. Within 10 minutes or so, the pager beeps and the first 200 characters of your message are received.

Perhaps just as interesting as this unique gadget is the opportunity to read the 75-page document on Wavell's Web page that makes available all the messages, poems, and jokes that people have sent. Messages have come from all over the United States, as well as from Ecuador, England, Norway, and elsewhere.

To page Wavell, point your Web browser at **http://ugrad-www.cs.colorado.edu/~wavell/page.html**. Enter your name and message, then hit send. If you include your e-mail address and if Wavell is not in class at the time, you may even get a response!

B&B There

If you've never stayed in a bed and breakfast (B&B), you're missing out on an enjoyable traveling experience. Unlike most hotels, B&Bs are typically small and intimate, offering more personable service to their guests. Warm and friendly lobbies, guest rooms with big fluffy pillows, cozy library nooks for quiet reading, and hosts who are more like parents than landlords are the norm for a good B&B. The other guests become your family, cuisine is often home-cooked, and meals are frequently served in close romantic quarters, almost like being in your own dining room.

If you'd like to locate a good B&B, get yourself signed up to the B&B mailing list, a resource for exchanging advice and suggestions on some of the best bed and breakfasts and country inns in the United States and abroad. To subscribe, send e-mail to **majordomo@world.std.com** with **subscribe b-and-b** in the message body. Leave the subject line blank. Enjoy your stay!

Get Your Feet Wet

If the thought of never having to wear shoes again leaves you feeling, well, footloose, take a few moments to check out the newsgroup **alt.lifestyle.barefoot**, where you're expected to leave your shoes at the door so you can fully appreciate the shoeless lifestyle. Read about barefoot hiking, going barefoot in the mud, walking barefoot on pavement, and health issues such as what to do about calluses, blisters, and other shoeless hazards.

If you'd like to share your barefoot experiences with others, you can send e-mail to the Dirty Soles Society at **dirty-soles-owner@netcom.com**. The society has a home page on the Web as well, where you'll find listings of upcoming barefoot events and vacations, an **alt.lifestyle.barefoot** FAQ, and even information on ordering "Go Barefoot" T-shirts. So click your heels together three times (with your shoes off, of course) and say, "I want to go to **http://www.erinet.com/brubro/dss**."

In Memoriam, Virtually

If the Internet is to truly imitate real life, it cannot exist without delineations of death as well. So it's no surprise that there is a Web site called World Wide Cemetery, where visitors may erect monuments to a deceased loved one, which can include photographs, movies, and sound files. Hyperlinks can be used by family members to create a genealogical record. Visitors to the World Wide Cemetery may leave flowers and even tour several world-renowned graveyards. Look for the World Wide Cemetery at **http://www.io.org/cemetery**.

Public Service

They're homeless, often helpless, and they are missing. The nation's homeless and their families are asking for your help.

Take a few moments to visit the Homeless/Missing Persons Project at **http://metro.turnpike.net/D/dmorgan/index.html**. This volunteer effort seeks to help families and friends locate missing adults. On the page you'll find recent listings of missing people, their photos, descriptions of where they were last seen, and if possible the circumstances regarding their disappearances. If there is an adult in your life who has mysteriously disappeared, you can submit a descriptive profile to be posted at the site.

Double and Triple Scoops

If you had twins or triplets, would you dress them exactly alike? Would you involve them in the same activities and encourage them to have the same friends? How would you handle any jealousy that might arise between them? Families of twins and triplets now have a forum on the Net for discussing these issues in **alt.parenting.twins-triplets**.

If a multiple birth is about to happen in your family, or if you're already the parent of twins or triplets, you should head straight for this newsgroup. Share your concerns, offer advice, or just be a lurker and read about the interesting experiences of others. Find out if twins and triplets really do have a certain sense of ESP. Learn how to raise kids who have their own identities, as well as how to deal with the exhaustion and fatigue that accompanies raising two or more infants at the same time.

BBS BBS

Bulletin board systems (BBSs) set up by software and hardware manufacturers are great places to get hold of specific printer drivers, software patches, product upgrades, and other technical product support aids. A comprehensive listing of such BBSs are now available on the Web at **http://mtmis1.mis.semi.harris.com/compph1.html**. Simply load up the page and search alphabetically for companies like Adobe, Borland, Compaq, Hayes, IBM, Intel, Logitech, Lotus, Microsoft, U.S. Robotics, and hundreds of others. In most cases, you'll have to disconnect from the Internet and dial the BBS directly. Many of the numbers are long distance, but you'll find plenty of toll-free 800 numbers as well.

Sail Mail?

The U.S. Postal Service, butt of many snail-mail barbs, has moved into cyberspace with an impressive Web page at **http://www.usps.gov**. Among other things, you'll find a ZIP+4 lookup database, complete postal rate tables, mailing tips, images of stamps, and a manual on international mailing procedures. This could be the precursor to more comprehensive online postal services.

More Zip

Any Windows user who does a lot of file compression knows what a pain it is to have to exit to a DOS prompt, use PKZIP, then get back into Windows to continue working. Now there's another option. WinZip is a shareware program that lets you zip and unzip files in Windows, without requiring PKZIP and PKUNZIP. Archived files can be viewed, run, extracted, added and deleted, all while still in the Windows environment. The newest version of the program, 5.6, also supports tar, gzip, and Unix compressed formats.

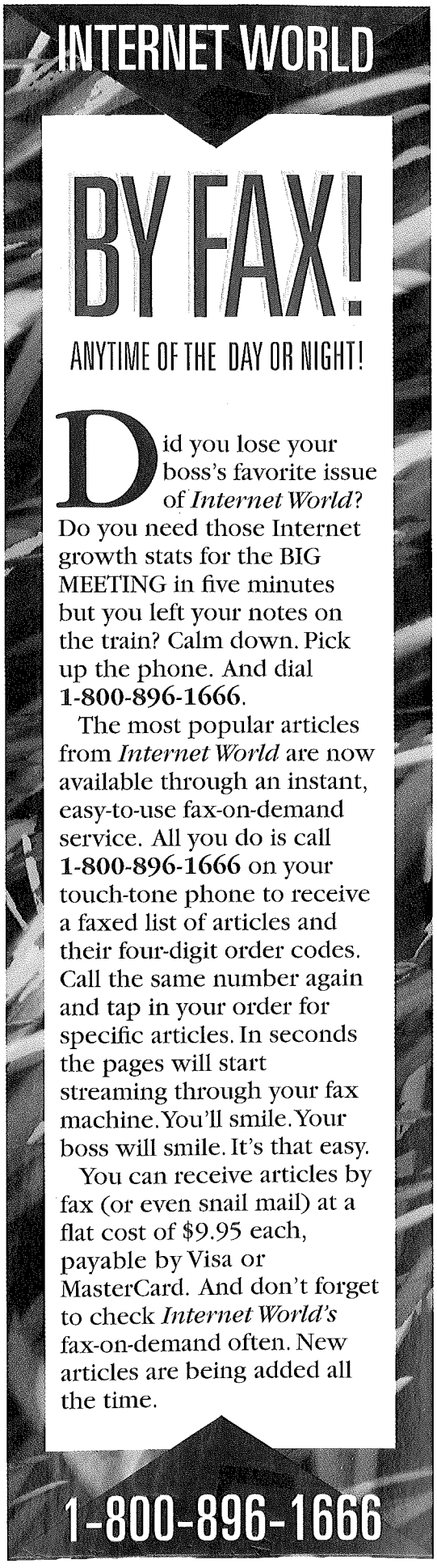
For a fully functional evaluation version, check out the WinZip home page at **http://www.winzip.com/winzip**. From there, you can download the WinZip Self-Extractor, a utility that lets you send zipped files to people who don't have PKUNZIP. The utility creates a file that will self-extract when run by the user.

School Daze

Evaluating and selecting the perfect college or university can be a tedious process. For many people, the bottom line comes down to dollars and cents. For others, it's the size of the campus that matters most. And for some, it's simply a matter of location. In the past, researching college campuses meant spending hours upon hours in your local library, pouring over cumbersome reference manuals. Now there's the Internet College Exchange (ICX) at **http://www.usmall.com/college/index.html**.

At ICX, you begin by completing a form telling the system which college features are important to you. Tell ICX the length of the degree program you're seeking, the size of the college you wish to attend (in terms of enrollment), and the tuition you're willing to pay. Based on your responses, you will be presented with an information hotlist about colleges all around the United States that meet your requirements. ■

Linda J. Engelman (lindae@netcom.com) is a freelance writer in Sunnyvale, Calif.



CIRCLE NUMBER 95

WRITE A CHECK, MATE?

Politics and intrigue in the world of organized Internet chess have forced players to choose between a free site and a for-fee site.

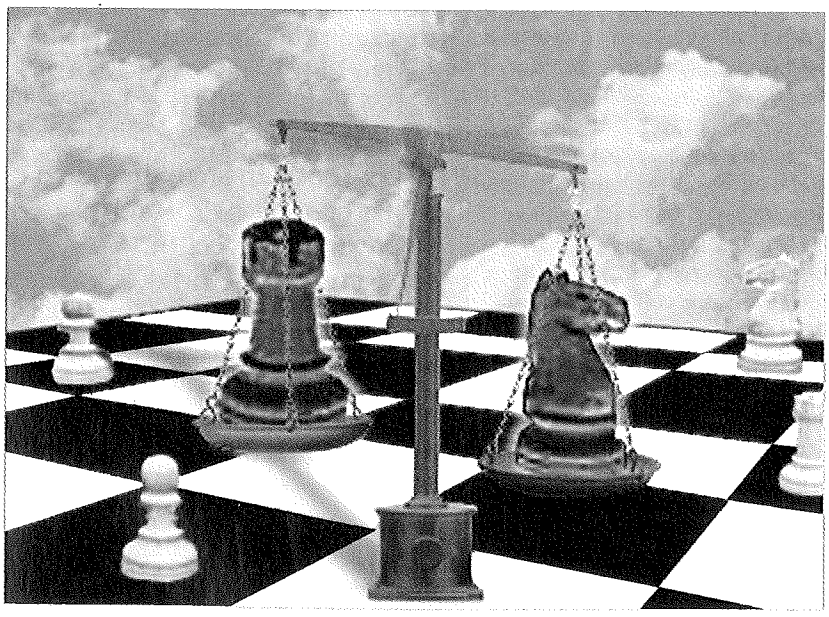
CHESS IS JUST HUGE ON THE INTERNET. NOT ONLY that, but if you read the chess article in the last issue ("Pawns Call King a Rook"), you'll know that the Internet chess community is involved in a deeply divided war.

I must confess that I am not a great chess player. I understand the rules and no longer call the knight "the horsie," but my knowledge of strategies, openings, and endgame variations are all grossly incomplete. The only person on this planet with whom I am evenly matched—chesswise—is my brother Adam, and any decent chess player watching us go at it would certainly be unable to control his or her helpless snickering.

But as the games columnist for this fine magazine, it is my duty to report on the state of this popular game on the Net and to help you understand the issues and options.

Lord of the Board

On one side is Daniel Sleator, the man behind the Internet Chess Club (telnet to **chess.lm.com 5000**). Back when there was only one chess server, Sleator led an effort to improve the server's code. New features were added, and things generally were cleaned up. Sleator then flabbergasted pretty much everyone by copyrighting the new code instead of sharing with all the other nice boys and girls. It now costs $49 a year to join the ICC, although students get a half-price break, and chess grandmasters are invited gratis.



As you might imagine, on the other side are members who feel that Daniel Sleator is the chess world's equivalent of Mussolini. They believe Sleator kidnapped Internet chess and is holding it for ransom. And they're not playing his game. They have set up the alternative Free Internet Chess Server (telnet to **chess.onenet.net 5000**), which uses the older, less sophisticated code that existed before Daniel Sleator came along. But hey, it's free.

Now, what you're wondering is, Which server is right for me? To answer this question, you must ask the following questions:

- Do you know how to play chess? If not, the correct server for you probably is FIBS, the First Internet Backgammon Server (telnet to **fraggel65.mdstud.chalmers.se 4321**).

- Do you have $49? If not, it looks like the decision has been made for you, eh?

- Do you want to join a server with only really nice people on it? Good luck. Most folks simply want to play chess, and that's just what they're doing. For other folks, though, the Battle of the Chess Servers has completely overshadowed any actual chess they might play. These people would like nothing more than to drop large heavy boulders on the heads of those who disagree with them. Lacking that, they have resorted to standard flame-war fare: Arguing with each other in **rec.games.chess** and **alt.chess.ics**, calling each other liars, making bad puns with each other's names ("Sleazor"), etc etc. The Anti-Sleators are a passionately self-righteous bunch—think "pit bull." The Pro-Sleators are a defensively self-righteous bunch—think "scandal-laden politician." And after a few minutes of reading their attacks on one another, don't be surprised if you suddenly decide never to use either server—maybe never play chess again—for fear that you might actually run in to one of these people.

Another factor is the game interface. Do you want a neat graphical interface, so you can click and drag pieces around an attractive board? Or do you want an ASCII text-based screen where the rook is an R and the queen is a Q? At first I thought that only Sleator's ICC could be played via graphical interfaces, which would give him a big advantage. Then I discovered that the same

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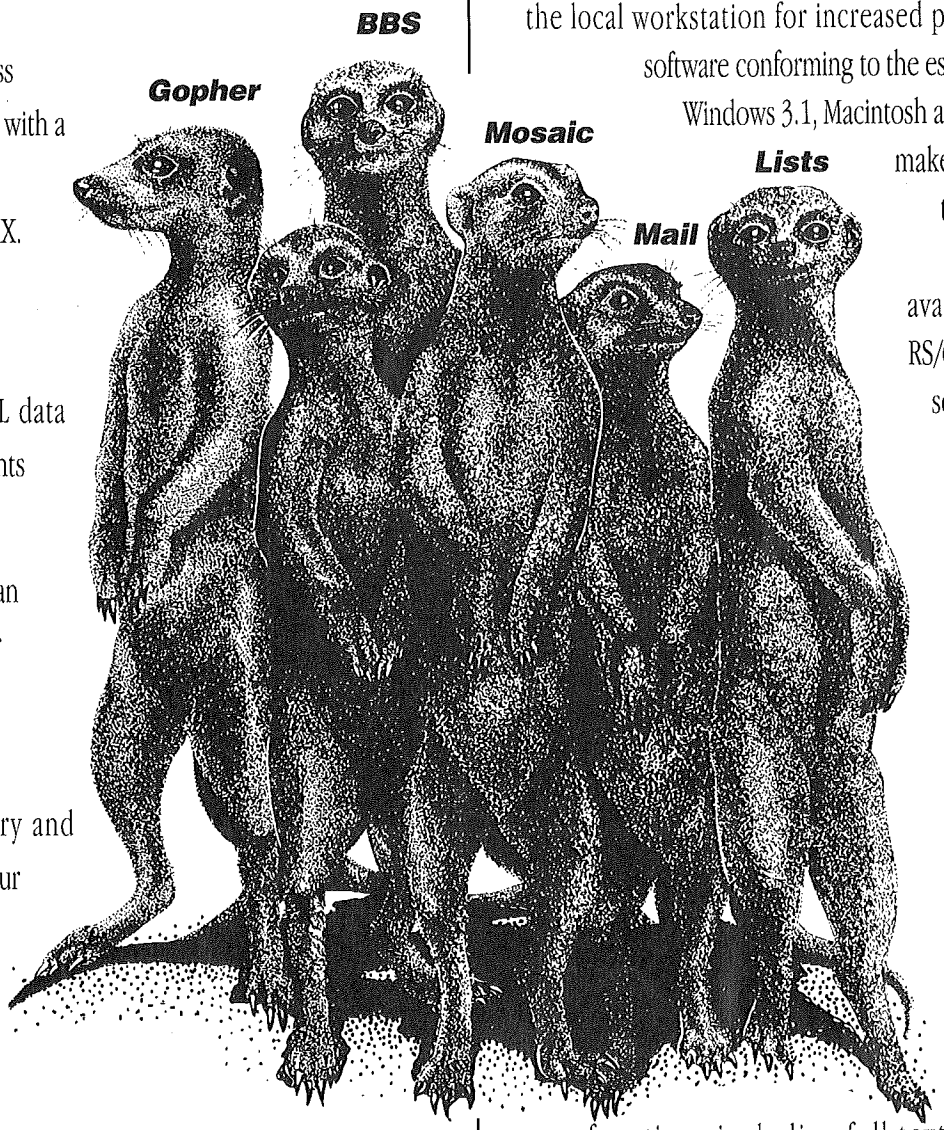
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CIRCLE NUMBER 37

interfaces work just as well on the free server. (At least they do under Windows. To see for yourself, type **interfaces** on either server to check your options; essentially, all the interface programs are kept at the FTP site **chess.onenet.net** in the **/pub/chess** directory.)

Both the free and fee-based server allow you to play chess. And they both allow you to use a graphical interface. At this point, the primary difference seems to be that one costs $49 and one is free. But that can't be right. Otherwise, why on earth would I ever pay $49 to the ICC? I posted a nicely phrased version of this question in several chess newsgroups and received lots of interesting answers, all of which can be summed up in one word: *events*.

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Those Little Extras

With this in mind, the most important question to ask when deciding between free and $49 is, Do you care about special events? Or put another way, How seriously are you into chess? Could you argue the merits of the Queen's Gambit, or do you believe that people who haggle about such things need to undergo some kind of therapy? If you're content with a knowledge level that believes the Queen's Gambit is a television game show, I recommend you stick with the free chess server.

True chess gurus, however, as well as gurus-in-training, might well want to spring for the 49 bucks and join the ICC. The commercial server has the dough to hire people for online lectures and classes, it houses a database of games, and it has lots of other things that the casual player probably doesn't care to spend money on.

For instance, one of ICC's recent events was a tournament pitting a grandmaster against a mighty chess computer. There were easily a hundred of us watching the grandmaster compete against the computer. The game wasn't taking place online, but the moves were being forwarded to ICC and displayed for the spectators, who were chattering in chess code ("RxN! PxR! E=mc²!"). What really made this an event was a camera aimed at the grandmaster and his computer opponent, and every minute or so a fresh picture was uploaded to a Web site, so you could constantly check up on the actual event as if you were right there in the room.

Great, right? A triumph of communication. There's just one small problem. I downloaded this picture every ten minutes or so, and it always looked the same: the grandmaster sitting with his head between his hands, studying the chessboard like it was a fragment of the Dead Sea Scrolls. Next to him was the computer, a large black box, being manned by a guy who I think was reading a book. Over the course of several hours, the only time this picture altered was when the chess computer crashed and the grandmaster went to the bathroom.

This may sound great to you. As I said, there were at least a hundred people there and a great many of them seemed to be having a fine time, politely but fervently debating how many spaces the white bishop should move. If you can see yourself joining in that debate, then by all means, shell out the $49.

The free server keepers say it will offer similar events, but it's presently way behind, in the same way you never saw any guest speakers at hippie communes in the '60s. Sleator can actually pay his grandmasters for their participation, and that's not something the free server could do anytime soon. But perhaps grandmasters and others will participate on the FICS to support its cause.

In any case, despite Sleator's having the financial advantage, the FICS is not scared of his fee-based service. Both servers seem to be equally popular, and there's a very good reason for that: Sleator is giving everyone on his server a free ride until the end of August. After that, the folks behind FICS believe Sleator is going to lose clientele by the truckload.

Furthermore, the free server is striving to catch up to ICC in terms of features, and assuming it does, Sleator will have to find new ways to make his paid service viable. Special events and lectures may turn the tide in his favor, but it's too soon to tell. If not, he'll have to think of something else, and quick. Sleator is selling cars in a town where you can get perfectly good mopeds for free. In this game, it's always going to be Sleator's move.

More Leisurely Pace

Join either chess server, and you'll notice something right away: These people play fast. Very fast. As in, you only have five minutes or so to make all your moves. Maybe even two minutes. These are *blitz* games, and they're the norm on the Internet chess servers.

Blitz games are so commonplace, in fact, that getting into a longer, more casual game can be something of a chore. To that end, William Smithers (**bilwil@primenet.com**) started The STC Bunch. STC stands for Slower Time Controls, and that's exactly what the folks on Smithers' mailing list are interested in.

There are more than 300 people on the list, covering a wide range of mastery levels. To add your name to the list, send e-mail to Smithers with your real name, your chess server handles, which server you prefer to play on, and the time controls you're willing to accept. (Choose any or all of the following time constraints: 30 minutes, 45 minutes, one hour, 90 minutes, or two hours.) Once you're on the list, it will be sent to you via e-mail twice per month. Then you can keep an eye out for other members of the Bunch while all around you the blitz games rage on.

For really slow games, you can't do better than playing by e-mail. To that end there is the International E-mail Chess Club (IECC) founded by Lisa Powell (**rpowell@uoguelph.ca**). Now this is *slow*. The standard pace is about one move every three days. (Although faster play certainly is encouraged.)

The IECC also has more vice presidents than some large corporations, and it is always coming up with new events and tournaments. To get in on these, send e-mail to Powell with your full name, e-mail address, home country, and estimated rating. Also mention whether you've played e-mail chess before. If you haven't, you'll get a helpful message covering IECC style and the format of game messages. A game may take a long time, but at least you'll have time to think. ■

Eric Berlin (eric@panix.com) is a New York-based freelance writer and playwright.

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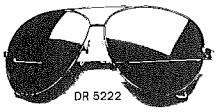
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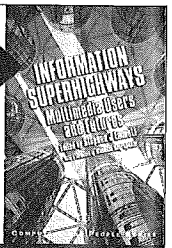
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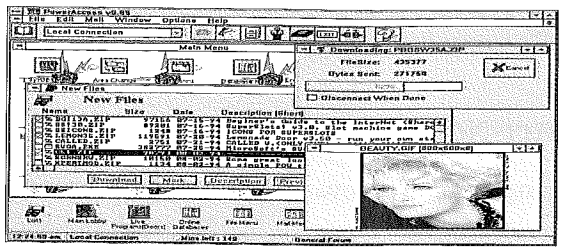
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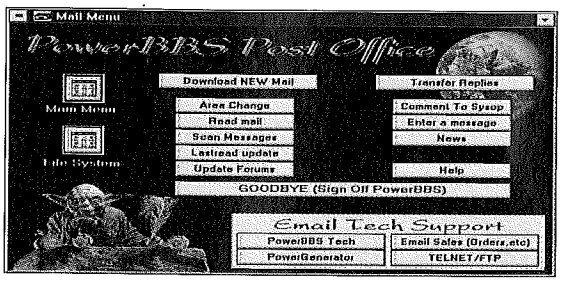


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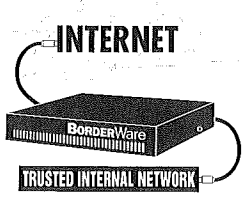
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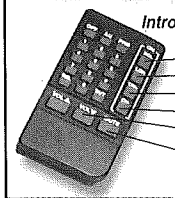
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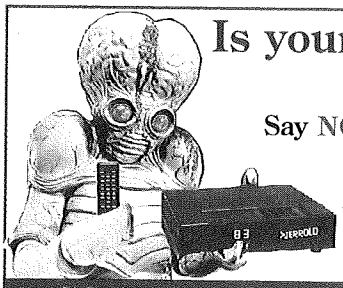
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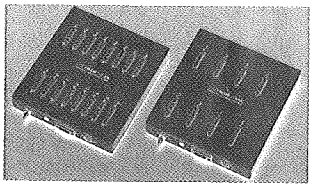
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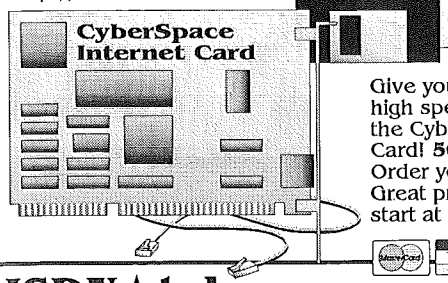
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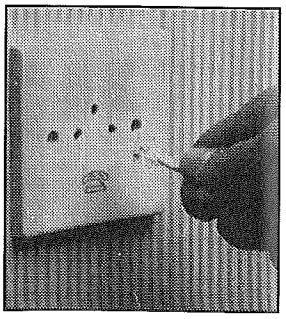
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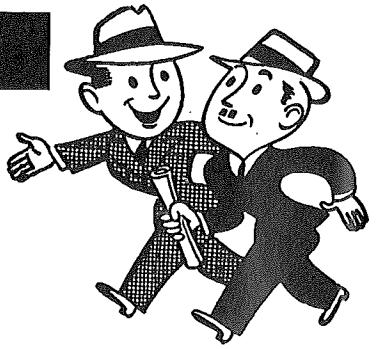
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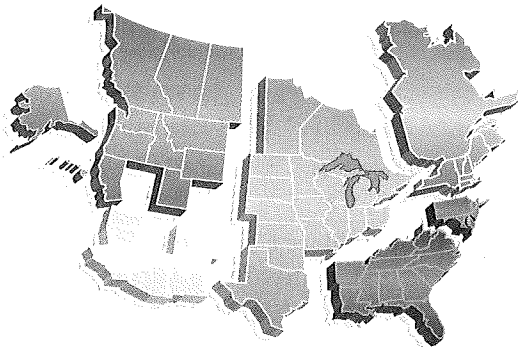
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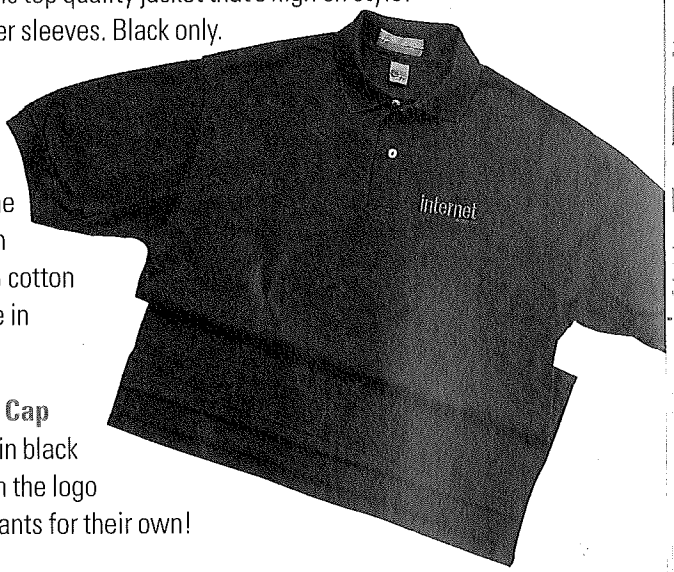


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CIRCLE NUMBER 57

INDEX TO ADVERTISERS

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Kid Stuff

These children's resources are rated G for General Audiences.

"Children are natural mimics who act like their parents despite every effort to teach them good manners." —Unknown

There has been a lot of commotion about how to protect children from indecent material on the Internet. With screening software and proper supervision able to solve this problem, let's explore some of the good material available for kids on the Net. From discussion groups in which they can find Internet pen pals, to Gophers where they can get information about starting a first job, children of all ages will discover that the Net is somewhere they want to be.

E-MAIL

A good place to begin getting acquainted with the Internet is KidCafe, a mailing list organized to allow kids to talk to one another in a supervised environment. It's limited to children between the ages of 10 and 15. To join, send e-mail to **listserv@vm1.nodak.edu** with **sub kidcafe *Your Name*** in the message body. Concerned parents can monitor what is being discussed by the kids by subscribing to the Response mailing list. To do so, send a message with **sub response *Your Name*** in the body to the same list server.

The national 4-H Council runs the 4-H Challenge list for discussion of the activities sponsored by the group. You can access it by sending e-mail to **listproc@listproc.wsu.edu** with **sub 4hchall *Your Name*** in the message body.

USENET NEWS

A wide variety of newsgroups have been created especially for kids. Most noteworthy are the **misc.kids.*** and **k12.*** hierarchies. The k-12 newsgroups were created by teachers for their students, resulting in a somewhat more classroom-like feeling. This is the perfect place to brush up on a foreign language or get help for math assignments. Many of these groups have evolved from purely studious environments to more chatter-oriented ones.

The **misc.kids** groups allow parents to gloat over the latest achievements of their children and exchange resources on how to deal with their little rascals. Parents interested in getting their children to spend more time on computers will probably want to peruse **alt.comp.shareware.for-kids**, where you can find reviews of shareware designed especially for kids.

FTP

There are plenty of games for children available via FTP. Find them at **ftp.cdrom.com** and look into **/pub/games/win/educate** for those that run on a Windows machines. Go to **sumex-aim.stanford.edu** and seek out the **/infomac/Game/edu** directory for Macintosh software. These are good places for obtaining edutainment software and a wide array of educational games, from geography quizzes to math and spelling-adventure games.

A noteworthy Windows program is Cash for Kids, which teaches children how to save and spend wisely. It is available from **ftp.cica.indiana.edu** in the **/pub/pc/win3/misc** directory as **cpfk.zip.** Another is Follow Me Drawing, which teaches children how to draw. It is available at **ftp.cica.indiana.edu** in the **/pub/pc/win3/desktop** directory as **fmdraw.zip.**

GOPHER

Two good Gophers for children are the U.S. Department of Education Gopher, located at **gopher.ed.gov**; and KidLink, which resides at **kids.duq.edu**. KidLink tries to get as many kids as possible "involved in the global dialogue."

Parents might want to join the Children, Youth and Family Consortium, which holds a document clearinghouse on **tinman.mes.umn.edu**, appropriately named the Children, Youth and Family Consortium Clearinghouse.

THE WORLD-WIDE WEB

KidLink maintains a home page at **http://www.kidlink.org**, where it expands on what's covered on its Gopher server. Not to be outdone, the National 4-H Council has its own Web server at **http://www.fourhcouncil.edu**.

The U.N. World Summit for Social Development maintains a home page with Voices of Youth at **http://www.linnet.ca/linkages/un/youth.html**, where it asks children to express their views about the state of the world to world leaders. Messages from the kids and responses from the leaders are archived.

If you're not quite sure what youth music and culture are all about, check out **http://www.drake.edu/univannounce/thomas/honors123.html**, where an entire college course is devoted to the subject.

A mother lode of childrens' links of all sorts resides at Uncle Bob's Kids' Page at **http://gagme.wwa.com/~boba/kidsi.html**. A virtual kid-o-rama hosted by the effervescent Bob Allison, it provides a bonanza of links to childrens' sites and resources on the Net.

Another exceptional site for kids is The Children's Page, hosted in the UK by The Bowen Family at **http://www.comlab.ox.ac.uk/oucl/users/jonathan.bowen/children.html**.

Other great pages of kids' links are Berit's Best Sites for Children at **http://www.cochran.com/theosite/ksites.html**, Kids Web at **http://www.npac.syr.edu/textbook/kidsweb**, Global Show-n-Tell at **http://emma.manymedia.com/show-n-tell/sites.html**, and the Ontario Science Center's Young Person's Guide to Hot Web Spots at **http://www.osc.on.ca/kids.html.** ■

Log Out

BY ANDREW KANTOR

BLAH, BLAH, BLAH

Why do some politicians insist on talking so much when they have nothing to say?

—the obviously world-wise Smokey Williams (**smokey@solar.sky.net**) preaching to the converted in **alt.politics.clinton**.

Even though The Page is an unwarmed gynecological instrument of oppression, it's also a cool tool for finding out what women on the Net are up to.

—(Ms.) Blake Kritzberg, responding to Robert Toups's Babes on the Web page, at **http://ucsub.colorado.edu/~kritzber/new/anti_rob.html**.

Kids should be at least 9 years old before they're allowed online. If they're younger, they'll need more supervision.

—Brad Stone in "How to Get Junior Wired" (*Newsweek*, Summer 1995 special issue).

Hey, I've lived in Manhattan for 2 years, and I haven't been shot yet.

—William Hull Forst (**whf2@ciao.cc.columbia.edu**) in **alt.revenge**.

So I guess what I'm trying to say is that if you look into your vinegar bottle and see a kajillion worms swimming inside, you might regard it as having gone bad.

—"Mordea" (**mordea@netcom.com**) in **alt.fan.cecil-adams**, discussing whether vinegar goes bad over time.

We don't want people standing trial and potentially going to prison for thoughts and fantasies they have.

—Paul Denenfeld of the ACLU, discussing the case of Jake Baker, whose rape fantasy on Usenet almost landed him in prison.

TEN NEWSGROUPS OF QUESTIONABLE VALUE

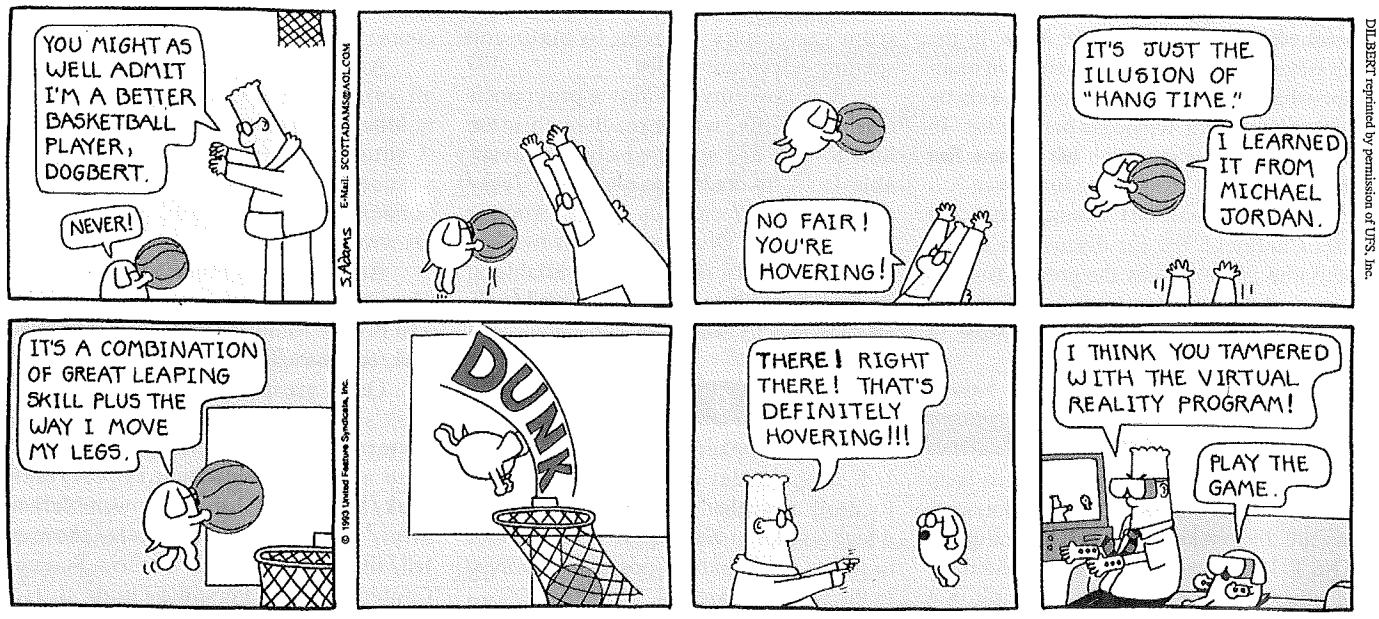
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whatever you're into

Is it our imagination, or is Prodigy's new logo a common occult symbol? And we thought Proctor & Gamble had problems.

Dilbert By Scott Adams



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City, State, Zip _____

Country/Postal code(if not USA) _____

Phone( )_____Fax( ) _____

E-mail _____

Are you planning to purchase Internet-related products and services in the next 12 months?
Yes ❑01 No ❑02

Are you purchasing for use at your company, home, or both?
Company ❑03 Home ❑04 Both ❑05

What is the approximate value of all Internet-related expenditures, Including PCs, that you will be involved with at work, and at home?

	Work	Home		Work	Home
$1 million or more	❑09	❑14	$50k to $99K	❑18	❑21
$500K to $999K	❑10	❑15	$25K to $49K	❑19	❑22
$250K to $499K	❑12	❑16	$10K to $24K	❑20	❑23
$100K to $249K	❑13	❑17	$5K to$9K	❑21	❑24
			under $5K	❑22	❑25

Which of the following Products and Services are you Planning to Purchase?

❑26 PCs
❑27 Macs
❑28 Notebooks
❑29 Unix Systems
❑30 Severs
❑31 LAN/Network Equip.
❑32 Internet Access
❑33 Online Services
❑34 Consulting
❑35 Books/Videos
❑36 OS Software
❑37 Applications Software
❑38 Web Browsers
❑39 Security/Firewalls
❑40 Communications Soft.
❑41 Modems
❑42 Printers
❑43 Email Systems Soft.
❑44 Monitors
❑45 Memory/Storage

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❑30 Severs	❑40 Communications Soft.
❑31 LAN/Network Equip.	❑41 Modems
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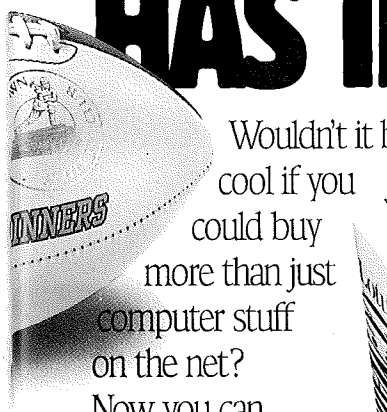
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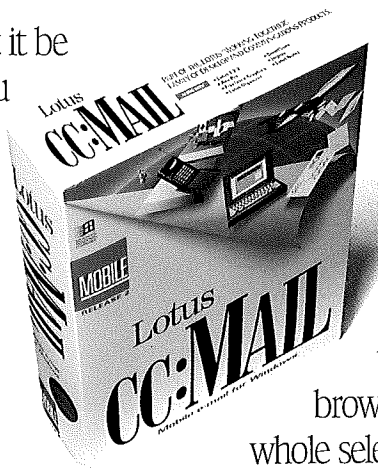
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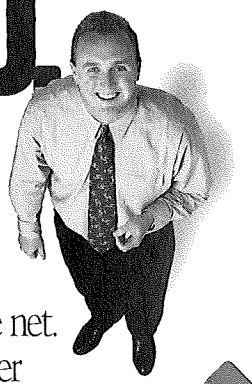
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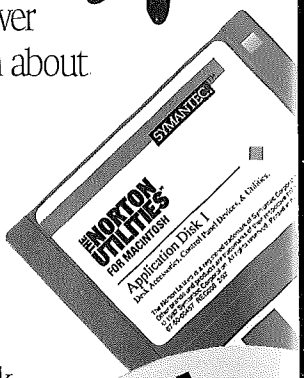
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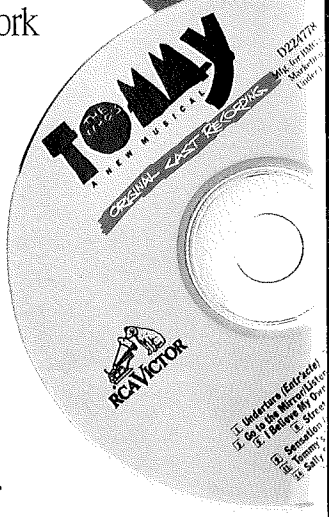
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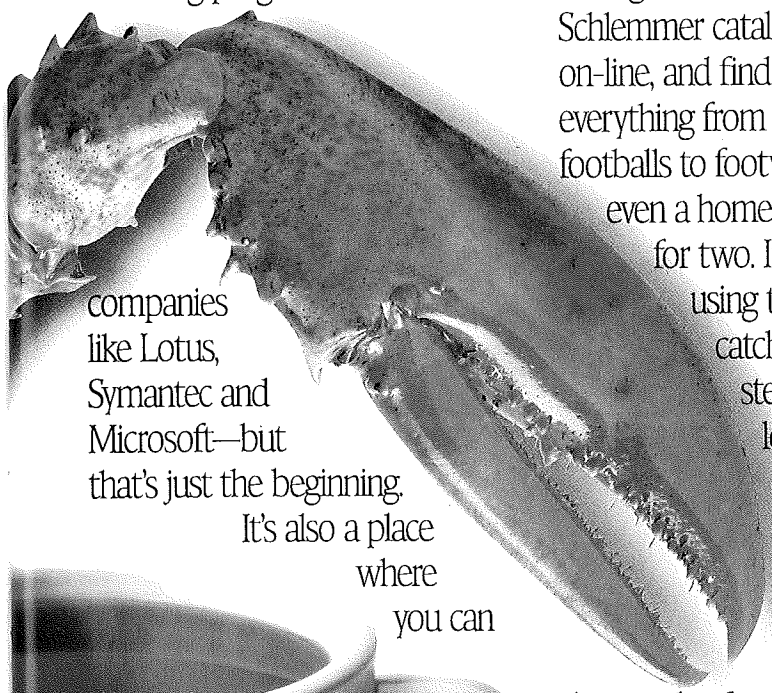


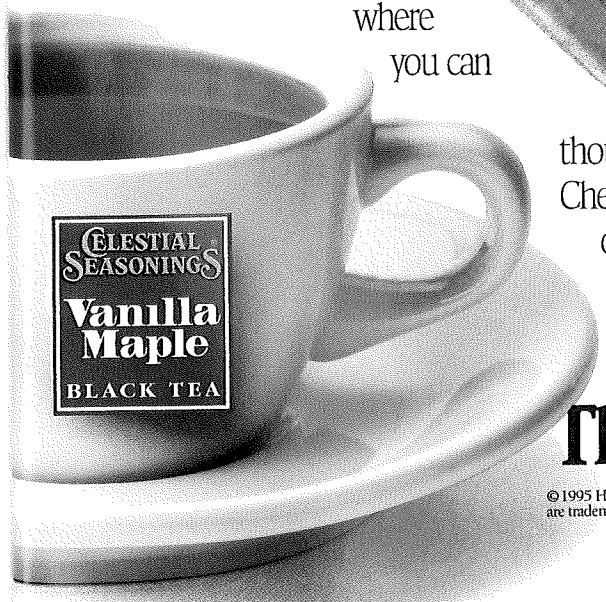
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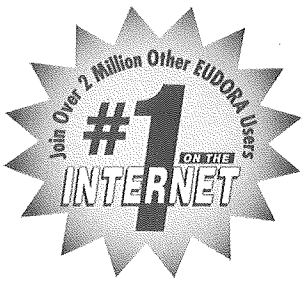
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CIRCLE NUMBER 61



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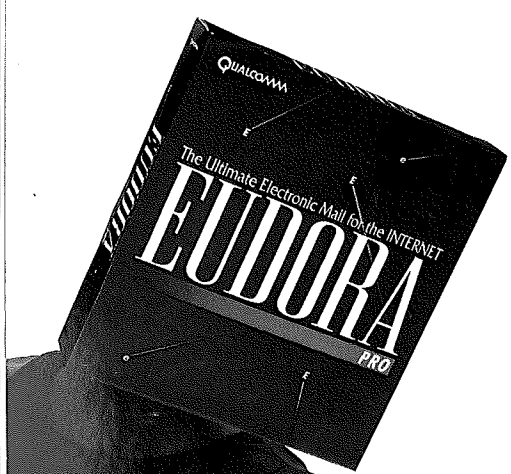
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Eudora Pro™ is like an Ultimate Cruising Machine. Its native Internet design means your messages glide onto the Info Highway effortlessly—without any flat tires.



Wow. Could Eudora Pro be the ultimate way for your e-mail to cruise the Internet?



Millions of Macintosh and PC users aren't the only ones applauding Eudora. MacUser selected Eudora Pro as the best communications software of 1994. (If they'd taken price into consideration, there wouldn't have been any competition.)



You don't have to be a road warrior to get on the Internet. Eudora's clean, intuitive interface makes handling messages a breeze. If using your e-mail makes your hair stand on end, call us.



For more information, contact your local dealer. For a listing of authorized Eudora resellers and distributors, call: 1-800-2-EUDORA ext. 6080; e-mail: eudora sales9@qualcomm.com; fax: 619-658-1500; worldwide web address: http://www.qualcomm.com/QualHome.html.

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